

DUAL LANGUAGE TWO-WAY IMMERSION PROGRAMS: EXPLORING
INSTRUCTIONAL PRACTICES THAT PROMOTE LITERACY PROFICIENCY FOR
SPANISH-SPEAKING ENGLISH LANGUAGE LEARNERS

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ABSTRACT

Sharon Raye Goldman: Dual Language Two-Way Immersion Programs: Exploring Instructional Practices That Promote Literacy Proficiency for Spanish-Speaking English Language Learners
(Under the direction of Dr. Kathleen M. Brown)

The Spanish-speaking population in North Carolina has grown exponentially, and education professionals are implementing dual language strategies to promote greater academic proficiency for these English language learners (ELLs) in their schools. Focusing on two-way immersion (TWI) programs in public schools across the state with noted success (Thomas & Collier, 2011), specific practices and strategies being used to accomplish increased literacy proficiency for Spanish-speaking limited-English proficient students (SSLEPs) were identified. This mixed-method study focused on ‘how’ and ‘what’ these programs were doing to promote students’ literacy proficiency. A conceptual framework was used to analyze data focused on socially just education and Latino Critical theory. Four practices for dual language education found in current literature and two emergent instructional strategies were reported to have a high impact on promoting SSLEPs' success in literacy proficiency for this subgroup. Comparisons of Reading EOG assessment scores were conducted for SSLEPs enrolled in TWI to those not enrolled in TWI, and statistically significant increases in score means and proficiency were discovered for the dual language students in two out of three districts. Exit rates for LEP students were likewise higher in one district and significantly higher in the second district. A strong, positive relationship was found between the use of TWI pedagogy and increased literacy proficiency for SSLEPs.

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Chapter 1

INTRODUCTION

Background

There is an ever-growing concern in the realm of public education in the United States regarding how to improve the academic achievement of English-language learners (ELLs) (August, Shanahan, & Escamilla, 2009; Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006; Jimenez-Castellanos & Topper, 2012). As this population continues to expand across the continent, educational leaders and professional educators struggle to find solutions to this problem (Kozol, 2012; Watley & Batalova, 2013). Achievement gaps for ELLs remain some of the highest across the United States, and students learning English consistently underperform their English-speaking peers regardless of the type of instruction they receive (Center for Applied Linguistics, 2014; Chen & Yildiz, 2010; Genesee, Lindholm-Leary, Saunders, & Christian, 2006; Hemphill & Vanneman, 2011; Migration Policy Institute, 2016). The knowledge on how to decrease these gaps and do a better job teaching ELLs is very modest, and the research base to inform policy and practice change needed is inadequate (Goldenberg, 2010). Current studies on teaching students who are learning English show that there is less focus on program research which could shed light on practices to improve these students' educational outcomes. “. . . also missing from conclusive studies are guidelines for determining skills and knowledge teachers must possess to be effective with ELLs” (Goldenberg, 2010, p. 20). How public schools can improve teaching practices to increase

overall educational outcomes for Spanish-speaking students is the primary focus of this study.

Over the last three centuries, legal and historical evidence on the impact of ELLs in American schools has been documented, creating a timeline for the development of bilingual education (BE) theory in the United States (see Chapter 2, Figure 2.1). Highlighting shifts that have occurred in the national consciousness on educating students who are limited English proficient (LEP), court rulings have set precedents for how states interpret their legal responsibilities and federal laws have established mandates to be followed by educational agencies across the country. A wide variety of instructional programs and strategies have been researched and employed to address these issues and promote the success of students acquiring English (see Chapter 2, Figure 2.6). Despite many attempts to bolster the educational performance of ELLs, academic success is yet to be obtained by this group of students in American schools (Rolstad, Mahoney, & Glass, 2005). No definitive solution has been discovered to thwart the low performance that most ELLs exhibit on standardized tests, yet there are methods employing dual language education models that illuminate some possible means for resolving this dilemma. Studies have shown that two-way immersion (TWI) classrooms across the country have had some success in promoting academic growth for ELLs (Cheung & Slavin, 2012; Collier & Thomas, 2004; Goldenberg, 2010; Li & Edwards, 2010; Lindholm-Leary, 2005). In North Carolina, educators and administrators of TWI classrooms are being lauded by education researchers for their great strides in promoting ELLs achievement by applying socially just practices and culturally responsive teaching through dual language (Darling-Hammond, 2012; Thomas & Collier, 2012).

It is estimated that the current number of students representing learners of English populating schools across the United States total over 5 million, and a large majority of them speak Spanish as their first language (National Center for Education Statistics [NCES], 2015). This growth is reflected in elementary and secondary schools across the states with a sharp increase in the number of students identified as ELLs (Viadero, 2009). Spanish has been recorded as the number one language spoken by non-English speakers in the United States with over two-thirds of the ELL population denoting Spanish as their first language (Barrera, 2011; Office of English Language Acquisition, 2015). Researchers agree that the clear majority of ELLs in U.S. public schools are Spanish speaking (Batalova, 2010; Capps et al., 2005). Further studies show that ELL students attending high-poverty schools acquire English at a slower rate than other ELLs, and students with low literacy skills in their primary language struggle even more to adapt to academic language (Genesee et al., 2006). The increase in numbers of ELLs has had a profound influence on the expansion of programs targeting this population and has put pressure on schools to maintain accountability standards (Crawford, 2004). The challenge public school systems face is to simultaneously absorb this exponentially-growing population of Hispanic students and decrease the achievement gap (Hemphill & Vanneman, 2011). North Carolina's population trends have shifted over 200 % in the last ten years with staggering exponential growth in the Spanish-speaking population (U.S. Census Bureau, 2010). Over one-fourth of NC public school students are ELLs, and the achievement gap between English- and Spanish-speaking students in kindergarten through 12th grade persists. Elementary students across the state exhibit double-digit gaps in both math and reading (NC Public Schools, 2015). Also notable is the fact that, overall, ELLs in

all grades grade perform poorer in school than their Black, Hispanic, and White peers (Suárez-Orozco, 2001, Thomas & Collier, 2011; Whittenberg, 2010).

A host of elements are necessary for ELL students to be successful in U.S. schools, and barriers to reaching their educational goals must be identified. According to leading scholars in language acquisition research, schools struggle to find ways that best meet the needs of students with little or no skills in English literacy (August & Shanahan, 2006; Slavin, 2010; Solórzano, 2008; Thomas & Collier, 2012). One barrier to the ultimate success of the ELL population in U.S. schools is the ability to become proficient in academic English, so educators must be provided with opportunities to learn and master methods to better serve ELLs (Theoharis & O'Toole, 2011). Also noted as causal factors prohibiting equitable access to education are the inadequate means of assessing students who speak another language as their primary language and a lack of cultural understanding due to the great diversity within the ELL populations (Kopriva, 2008). According to Thomas and Collier (2012), leading experts in the field of effective practices for educating English learners, it is recommended that a command of both languages should be developed for migrants to survive in the U.S. society. Educational leaders should also consider the development of assessments when measuring academic ability in ELLs. The lack of reliable and valid assessments for testing ELLs was cited as a prominent problem in adequately measuring their academic abilities (Escamilla, 2006).

Illuminated by accountability standards set forth in the No Child Left Behind legislation (2002), the achievement gap between English-speaking and their non-English speaking peers persists (Center for Public Education, 2015; National Assessment of Educational Progress, 2012). According to the Center for Public Education (2011), it takes an

average of 4–7 years for students learning English to become proficient in academic English—the language needed to succeed in the classroom. Many standard measures of academic success used to determine proficiency in the United States are based on the ability of students to perform on English tests, which is often identified as the pathway to success in U.S. schools (Baker et al., 2014; Collier & Thomas, 2004; García, McKoon & August, 2008). While there is no common benchmark for English-language proficiency, there are a vast number of assessments being given across the country. Measures used in one state may deem an ELL equipped to succeed in a predominantly English classroom, while those being used in another may find them to be limited-English proficient, marking the need for language accommodations in order to succeed (Kopriva, 2008). There is also a great deal of socioeconomic variation among ELLs, which increases the likelihood that they, more than native English-speaking children, will live in poverty and will have parents with limited formal education (García & Cuéllar, 2006). In addition, ELLs are more likely to be an ethnic/racial minority (Capps et al., 2005). Each of these factors—low income, low parent education, and ethnic/racial minority status—decreases group achievement averages across academic areas, leading to the relatively low performance of ELL students (Hernandez, Denton, & Macartney, 2008).

Many educational programs have been applied to target the performance of ELLs in schools across the United States with varying degrees of overall effectiveness. Exclusive models of instruction, such as English as a Second Language (ESL) and English-only models, have been employed as a primary means to improve acquisition of language and content mastery across the country with limited success (Center for Public Education, 2015; Office of English Language Acquisition, 2008). These methods focus on the teaching of

strategies to master the English language rather than developing content mastery and often are done in isolation from the mainstream population (Valenzuela, 2010). This type of instructional strategy currently represents the least effective method for improving academic success in ELLs (Office of English Language Acquisition, 2008). While ESL strategies have less of an effect on student academic proficiency, they do allow ELLs access to their education more than being placed in English-only settings within their schools (Bunch, 2011; Center for Public Education, 2015; Thomas & Collier, 1997). Other school programs for ELLs, which focus on the additive principle of using the primary language to bolster their success, utilize immersion methods to promote mastery of academic English (Lindholm-Leary, 2012; Migration Policy Institute, 2016). Some of the core components to these inclusive strategies for ELLs are being applied in dual language classrooms in states with predominant second languages, and the majority of these have been applied for students with Spanish as their first language (Batalova, 2010; Passell, 2008). The differences between regular classroom instruction, ESL exclusive instruction, and dual language (DL) inclusive instruction are vast and highlight how non-English speaking students acquire the content knowledge very differently in each of the respective models (de Jong, 2010).

Two-way immersion (TWI) dual language programs include both content and language objectives, are delivered in both the primary language and English, and have resulted in extreme increases in student scores on standardized tests (Christian, Genesee, Lindholm-Leary, & Howard, 2004; Lindholm-Leary, 2012; Thomas & Collier, 2012). The most current research shows that ELLs with formal schooling in their first language tend to acquire English faster than their peers without first language literacy skills (August & Shanahan, 2008; Cheung & Slavin, 2012; NCELA, 2015). There is evidence that DL

education offers greater results than any other programs currently being used and that long-term achievement is greatly enhanced when students receive instruction in their heritage language during their first years of assimilation into English-speaking schools in the United States (Slavin, 2010; Thomas & Collier, 2012). DL programs show the most promise in raising the achievement level of ELLs (Office of English Language Acquisition, 2015). This conclusion is also supported by studies that compare DL programs to English-only programs across the United States (August & Shanahan, 2006; Rolstad et al., 2005; Theoharis & O'Toole, 2011; Thomas & Collier, 2012).

Statement of the Problem

The academic achievement gap for ELLs continues to show that English speakers far outperform ELLs on all measures of standardized testing (Kena et al., 2016). Programs and methods have been developed to address the academic achievement deficit represented by ELLs in schools across the country, yet the many barriers remain. Affording this population adequate access to their education has become a national challenge, one which has school districts across the continent striving to develop systemic solutions (de Jong, 2010). Educational inequities presented to Latino students and students from other immigrant backgrounds in the United States are well documented (Gándara & Contreras, 2009; Valencia, 2008). A lack of success in standardized programs used in the United States to instruct ELLs is problematic for our institutions of public education. Instructional methods and models have evolved over the years, targeting our immigrant populations, yet the problem persists (Solórzano, 2008; Thomas & Collier, 2006; Viadero, 2009). Educational programs designed for ELLs have not produced high rates of academic success in elementary and secondary education (Francis et al., 2006). Decades of research have been presented as

evidence which shows the need for further development of pedagogy for teaching ELL students (August & Shanahan, 2006; Cech, 2009; Cheung & Slavin, 2012; Li & Edwards, 2010; Lindholm-Leary, 2012). Ongoing efforts have attempted to transform education in a positive manner for Latinos in the United States to ameliorate these inequities (Alfaro et al., 2014). Latino critical theory (LatCrit) explicitly directs the attention of the educational community to school inequities inherent within the institutionalized systems across the U.S. which inhibit an equitable access to positive school experiences for Spanish-speaking students (Colon-Muñiz & Lavadenz, 2015; Huber, 2010). Despite attempts to improve educational access for Spanish-speaking students, “progressive educators, researchers, and policy analysts have long argued that approaches to educational reform that do not honor the cultural and linguistic resources of Latinos are likely to fail, now and in the future” (Alfaro et al., 2014, p. 17).

For many years, states have been tackling the issue of increasing the academic performance of students in their schools who do not speak or understand English. As early as the 1970s, programs were implemented in states whose immigrant population percentages were high, often in the southwest and northeast regions (Ovando, 2003). With increasing trends in diversity across southern and eastern states, the need to address the issue is clear for public schools in North Carolina. The current average reading scale score of ELLs in North Carolina is far lower than that of their English-speaking peers, and merely one-third performed at a basic level of competency (NC Public Schools, 2015). By eighth grade the numbers of successful students in either basic or proficiency levels of the ELL population is even lower, with almost two-thirds performing two grades or more below the standard (NAEP, 2015; NCES, 2015). As ELLs in NC continue into high school, even fewer can

perform, with a mere 7.4% of limited-English proficient students passing their reading End-of-Course test (NC Public Schools, 2015). Most attempts made to close this achievement gap in our public schools have failed, and the programs that are showing progress and promise are few and far between. Research focusing on methods that work with ELLs is lacking (Goldenberg, 2010). Addressing the issues faced by the Spanish-speaking population of students in our schools in a positive manner can help to ameliorate inequities (Alfaro et al., 2014), and recognition of LatCrit theory may improve educational environments in their schools. Exemplifying methods by which dual language strategies being employed with the greatest success is explicit in improving achievement for ELLs in North Carolina and may offer insight into positive transformations in teaching and learning.

Purpose of the Study

There is a high academic failure rate of the Spanish-speaking ELL population in North Carolina, and it is coupled with the exponential growth of this population. Therefore, conducting a study on effective methods and strategies supporting a socially just and LatCrit sensitive education for linguistically diverse students will provide pertinent information to the education community. This study focused on identifying specific instructional strategies to teach literacy being used in TWI dual language programs across the state with consistent success. Drawing from programs available in North Carolina, this study filled a gap in current research regarding dual language programs experiencing success in literacy for ELL students through the use of TWI strategies. The literature that currently exists relies heavily upon data and test scores to measure program success, yet there are few studies on how these results are achieved (Reyes & Vallone, 2007; Collier & Thomas, 2014). Overall, there is documentation of TWI program effectiveness, yet specific components that generate their

success is lacking in the literature (Alanis & Rodriguez, 2008; Alfaro et al., 2014; Lindholm-Leary, 2012; Viadero, 2009). Through intensive research on the strategies used to warrant the most success for native Spanish-speaking students in TWI programs, this study has uncovered methods for teaching ELLs across the state.

Significance of the Problem

There is a wealth of information and research available about different pedagogy that has been developed across the United States and in other countries to address the learning challenges faced by ELLs. Many programs have been implemented with a wide variety of instructional methods to address this concern and are warranting varying degrees of success (Chiappe & Siegel, 2006; Genesee, 2008; Lindholm-Leary, 2012; García, Skutnabb-Kangas, & Torres-Guzmán, 2006; Viadero, 2009). However, a large majority of the programs which offer the greatest successes for ELLs have been developed, conducted, and studied in isolation (Thomas & Collier, 2012). Many of the studies focus on a small sample of students, a program in a specialized or magnet school setting, or a school within a district which is piloting a program to address their concerns with regards to improving education for ELLs. Much more difficult to find is a study that highlights the success of the particular methods being used within dual language programs (Alfaro et al., 2014; Viadero, 2009). There are no consistent standards for the few programs that have been successfully implemented, and it has yet to be determined if these programs would work within differing populations and cultures (National Center for English Language Acquisition, 2011). As it stands, every school, district, and state are on their own to develop programs focusing on the growing population of ELLs in the U. S., and this need has quickly become a priority for many states (Migration Policy Institute, 2016). The disparity in statistical data, as well as overall

struggles with the effectiveness of teaching pedagogy, identify that a current problem persists on the larger scale of adequately educating our ELL population (García, 2005; Hemphill & Vanneman, 2011; Lindholm-Leary, 2008; Parrish et al., 2006). This gives cause for further studies to explore alternative methods of instructional programs for ELLs that will promote academic achievement across districts, states, and the entire country.

For decades, this country has housed millions of immigrants in its public schools, and the strong majority of them who do not understand academic English are Spanish speakers. This trend gives the United States an opportunity to develop aggressive educational programs based upon the common second language (Cheung & Slavin, 2012). Developing adequate resources, both fiscal and human, and providing professional development to deliver program models have been cited as an immense challenge for education agencies in all regions of the country (August, 2006; Capps et al., 2005; Thomas & Collier, 2012). Challenges, both instructional and political, must be faced in the decision for a school system or state to implement programs developed to target academic growth and success for its ELLs.

The academic achievement gaps, which drove the No Child Left Behind Act (2002) set a precedent of subdividing the student population by race, socioeconomic status, special educational needs, and language of origin. Meeting the challenges of this legislation has become the yard stick by which all schools are measured (Crawford, 2004). Categorizing the failure of the non-English speaking subgroup has resulted in many schools across the country not meeting their adequate yearly progress (AYP) and growth goals (NCES, 2015). In North Carolina, most schools with populations of Limited-English proficient (LEP) students large enough to comprise a subgroup have failed to meet their AYP goals for the past 10 years. Furthermore, most of the annual measurable objectives for this LEP subgroup had most or all

achievement measures far below any other subgroup, including students with disabilities (NC Public Schools, 2015). The data highlighting the extreme deficit in meeting the academic needs of ELLs is highly significant and outlines an urgent need in North Carolina to find a way to amend the problem and provide more equitable programs for this population.

Research Questions

The primary research question driving this study is: “How do the established two-way immersion (TWI) methods currently employed in North Carolina’s dual language programs promote the literacy proficiency of Spanish-speaking English language learners (ELLs)?” Other questions relative to how they are achieving this result are: “What specific strategies being employed are associated with the greatest success within the TWI programs?”; “How do TWI classroom teachers describe the most successful strategies promoting student proficiency in literacy in their classrooms?”; and, “Is there consistency across different programs to validate these findings?”; Finally, in order to ascertain methods that are held in highest regard by the administrators and teachers within the programs, it is relevant to understand: “Do the quantitative data support the qualitative findings from the interview and questionnaire data?”

Conceptual Framework

Inequity in education has been theorized for many years across the country, and researchers attempt to drive policy-making to improve equitable practices in education with the evidence they collect but often fall short when they fail to ground their work in theory (Lucas et al., 2010). Further review of the issue shows that, just as social justice and equity approaches have primarily failed in education in the past, so too will efforts that do not recognize the language barrier faced by Spanish-speaking students and the culture they

represent (Portes et al., 2013; Valencia, 2010). Dual language programs have evolved from many studies of inequitable access to education for students in the United States who speak a language other than English. Components of critical race theory, post colonialism, vertical equity, and social justice all have tenets that resonate with the movement in support of dual language programs and legislation governing its practice (Hornberger, 1990). The elimination of first language maintenance practiced by English-only programs and transitional bilingual programs resulted in Spanish speakers from Mexico experiencing high levels of discrimination in schools based on race, accent, and country of origin (Liggett, 2013; Lippi-Green, 1994).

Social justice leaders who are committed to equity and justice are creating better educational services for marginalized students by eliminating pull-out and self-contained programs for diverse learners. Instead they have advocated for inclusive services that teach students in heterogeneous groups (Theoharis, 2009). The oppression of linguistically diverse students experience in English-speaking schools has been shown to parallel the dilemmas faced by Black students in U.S. schools (Liggett, 2013; Shuck, 2006). Ladson-Billings and Tate (2006) highlighted the notion of intersections across race and property, and concurrently strong lines have been drawn to connect race and language for Spanish speakers (Ochoa, 2016). While most Spanish-speaking ELLs in the United States are also students of color, language of dominance was also an exclusionary factor (Valenzuela, 1999). The inclusion of LatCrit theory particularly applicable for this study, as it focuses on dual language programs for Spanish speakers.

Theories of equity and equal access to education for minority students are also pervasive in legislation put forth in the United States to address the ongoing challenge of

meeting the needs of diverse student bodies (Capps et al., 2005; Jimenez-Castellanos & Topper, 2012; Lucas et al., 2010; Verstegen, 2015). Language policies in many states require LEPs to take standardized tests in English before they have developed proficiency, thereby testing their language ability rather than their content knowledge. The result of these practices in our public-school systems across the nation is the emergence of social categories that frame hierarchies of race, class, and ethnicity (Liggett, 2013). The socially just and equitable options for language minorities become thusly revoked, creating, once again, the notion of the American-English moral and cultural superiority (Skrla et al, 2004). U.S. public schools need to recognize and denounce the institutionalized racism plaguing non-English speaking communities; otherwise, education will never be equal for ELLs (Ochoa, 2016). Components recommended by Ammarota (2007) include multicultural education, studies of Spanish culture, offering social justice classes in middle and high school, and promoting social justice teacher education, as well as providing mandatory courses in high school on multicultural education in which they learn about cultural diversity, race relations, and race and gender oppression. The application of social justice and LatCrit theory focus this study and ground the review of the data herein regarding the teaching of Spanish-speaking ELLs.

Methodology

The study used a mixed methods approach outlined by leading experts in education (Creswell, 2008; Leech & Onwuegbuzie, 2009; Teddlie & Tashakkori, 2006), and examined each of eight participating schools within three North Carolina public school districts as separate case studies and comparatively to analyze the findings. Qualitative data collection in these schools was obtained from program administrators and teachers in the first phase, and the academic progress of the ELL students on English grade-level assessments and ACCESS

exit rates were charted in the second phase. Matrices were compiled to examine relevant themes to better understand the success of programs and strategies for the targeted populations of ELLs. The scores were analyzed across the three participating districts and compared to data across the state for ELL proficiency in reading. This mixed method design yielded a rich set of data from which to draw pertinent and timely information regarding teaching Spanish-speaking students in two-way immersion programs.

The study utilized the partially mixed, sequential, dominant status mixed methods design outlined by Leech and Onwuegbuzie (2009), which employed a two-phase approach in collecting data. The sequential design applied qualitative research protocol prior to the quantitative analyses to obtain the opinions and experiences of program directors and administrators without the influence of statistical significance found in the data. Critical to determining the overall effectiveness of the program experience, these qualitative data allowed the researcher to obtain empirical knowledge of the subjects' typical experiences working with and in the TWI programs. The use of qualitative measures may have sheltered some bias regarding the success of each site and the competition across the eight schools included in this study. The interview data was collected from program directors, site administrators, and TWI teachers during Phase I, with no overlap of quantitative data to capture participant perspectives on program methods. The sets of data obtained by giving attention to the qualitative factors involved in implementing TWI programs on a micro-level helped to establish connections to the perceived effectiveness of program methods and strategies.

During Phase II, an examination was conducted of quantitative grade-level cohort data for the past four years, including school years 2013-2014 through 2016-2017, and

included End-of-Grade reading assessment scores for third through eighth grade Spanish ELLs, enrolled in both TWI programs and traditional classrooms in the schools. Data was collected only from individuals who had participated in the TWI programs for at least three years prior to including their assessments scores. Additional data was collected from annual ACCESS test scores administered to determine placement for all Spanish-speaking ELL students in the schools. These data were organized by groups, grade levels, whole school data, and across all eight schools for comparative analysis. Instructional practice data collected in Phase I was compared to the quantitative data by individual schools and as part of cross-cases analyses to establish its relationship to programmatic success. Results of these findings regarding the quantifiable success of the programs and strategies being studied were noted as evidence of methodological validity.

Assumptions and Limitations

This study placed all participants working in the TWI programs on the same level regarding how they measured student success, yet their knowledge of and experience in dual language education varied greatly. Variables regarding the length of time each participant had been involved in the program was noted, and teachers in their first year of working in the TWI program were eliminated in Phase I. This decision was based upon the assumption of the researcher that teachers had not had enough professional exposure to the TWI program to fully articulate their perspectives. Their perceptions of success noted from participants were then compared to quantitative assessment data in the analyses stage of the study, but the researcher recognized that there were many other internal variables that may be considered when evaluating student success, such as socioeconomic status, learning disabilities, family structure, etc. During Phase II, student data were collected on groups of students created for

comparisons: limited-English proficient (LEP) students who were enrolled in one of the TWI programs being studied for at least three years and LEP students who were enrolled in traditional classrooms. A minimum of three years of inclusion in the TWI programs was assumed to be the time needed for the difference in pedagogy to manifest in identifying student success or lack of success that could be correlated to the program model. A focus on Spanish as the dominant language of LEP students in North Carolina was also controlled for as the second variable.

The study focused on Spanish-speaking LEPs rather than all LEPs regardless of primary language with the intent of garnering the largest majority of ELLs for the study. The intentionality of this was to identify a large enough pool of programs to study within the state of North Carolina. The goal was to find strategies that were increasing academic performance in literacy for Spanish-speaking ELLs (SSLEPs), which may be beneficial to all English learners across the state. Since there were currently no districts in the state which had adopted TWI dual language programs on a large scale, which might include many TWI schools within one district rather than currently having only one to three TWI schools in several districts, the data collections included in this study were void of that information. It is also important to note that there were no data analyses conducted on the success of SSLEPs compared to their English-speaking peers enrolled in the TWI programs in this study. In order to analyze the success of SSLEPs in these programs, research of the success of English-speaking students in the same TWI programs to discern its applicability across all demographics would be prudent but was not part of this body of research. Furthermore, comparisons were made of SSLEP students enrolled in the selected TWI programs versus SSLEPs not enrolled in the TWI programs. The limited access to information separating the

LEP students enrolled in TWI from those enrolled in traditional classrooms existed, so not all sets of these data were available, thus hindering this analysis. Also, comparative analyses being conducted statewide include all LEPs as were reported cumulatively, not just Spanish-speaking LEPs who make up 85% of LEPs in North Carolina. This created data that were slightly skewed, though did not serve as a major conflict as the qualitative focus is only on Spanish speakers. Finally, viewing this study through the lens of social justice and LatCrit theory enabled the researcher to extract direct associations to its applicability as an equitable education for Latino students, yet at the same time excluded other potential findings which were not associated with the identified conceptual framework.

Several additional variables existed which were necessary for consideration in the study. Critical to the success of any academic program is the socioeconomic status of families in attendance at these schools, which often shows some of the greatest achievement gaps (National Assessment of Educational Progress, 2015; North Carolina Report Card, 2013). There were data to support findings regarding the high percentage of Spanish-speaking ELLs in the country who are also included in the economically disadvantaged subgroup (Migration Policy Institute, 2016; NCES, 2015). Perhaps the school leaders in this study had insight regarding how the economic disadvantage factored into the equation for their student populations, but there were no datasets established within this research to include that potentially pertinent criterion. Finally, the role that the family structure plays in the success of our students is tremendous (Collier & Thomas, 2014), and while this research recognized that it was a delimiting factor, it was not reviewed within the context of this study. Also noteworthy as a limitation is the researcher's novice status, which may have

served to be a constraining factor in eliciting information as an interviewer and compiling and analyzing data.

Definitions of Key Terms

ACCESS Testing—Annual assessments given to all North Carolina students in grades kindergarten through 12th grade whose primary language is not English to measure comprehension of the English language in reading, writing, speaking, and listening. These scores are used to determine if students require additional assistance in school to provide equitable access to education.

AYP (Adequate Yearly Progress)—A measure of growth as determined by state testing to establish if subgroups of students established by the *No Child Left Behind Act of 2001* are achieving learning goals.

BE (Bilingual Education)—The term originally applied in the United States to educational programs that targeted ELLs only and included English and the primary language of students within the curriculum. The literacy focus in most BE classrooms is English proficiency.

DL (Dual Language)—The term that evolved from BE to include educational programs in the United States that focus on developing literacy in both English and the primary language of students, includes any primary language learner, and includes multicultural education within the curriculum. The literacy focus of DL classrooms is fluency in both the primary and the secondary language.

ELLs (English Language Learners)—School-aged students whose primary language is not English.

EOG (End-of-Grade) Testing—Standardized assessments given annually in North Carolina in third through eighth grades to show proficiency in reading, math, and science.

LEP (Limited English Proficiency)—Students who have shown to perform below minimum proficiency on testing in English reading, writing, speaking, and/or listening as measured by the annual ACCESS test given to all LEPs and all new students to NC schools not yet classified whose primary language is not English. To exit LEP status a minimum composite score of 4.8 on the ACCESS test is required, along with a score of 4.0 or above on both the reading and the writings portions of the test.

NCLB (No Child Left Behind Act of 2001)—Legislation signed into law by President George W. Bush which established annual measurable goals for schools in the United States to show how their students were performing on standardized tests. This law identifies subgroups of students such as race, class, socioeconomic status, and learning disability.

Social Justice—A tenet that applies the recognition of oppression, acting to interrupt the cycles of oppression, and embracing one's students and self in reflective understanding of individual differences and striving to meet those needs, often associated with teachers and students within educational settings.

TWI (Two-Way Immersion)—A specific type of DL class roster which is structured to include a mix of both English language speakers and learners within a class, and it is ideally composed of 50% English speakers and 50% English learners. Biliteracy is developed by teaching in both English and the second language. The most common models of TWI are 50:50, 80:20, and 90:10. These numbers refer to the percentage of time in which the academic content is taught in the targeted second language and in English respectively, with the latter two models using gradual immersion to balance 50:50 instruction by third grade.

Summary

Educational systems in the United States have been unable to offer English language learners an equitable academic opportunity in public schools. As the population of ELLs grows exponentially across the country, schools attempt to ameliorate the many issues resulting from the barriers these students face in achieving academic success. The consistent, low performance of ELLs is exacerbated by the tremendous growth in the population of Spanish speakers in this country. Research shows that there is consistent, poor performance in all grades and in all subjects for ELLs, and more specifically for Spanish-speaking ELLs who comprise the clear majority of this population. North Carolina has had one of the highest levels of growth in its Spanish-speaking student population, and some districts across the state have aggressively addressed the problems through the use of TWI dual language classrooms. Many of these programs have experienced notable progress for their ELL populations, yet, there are minimal data available regarding teaching pedagogy that is successful for teaching ELLs. The use of a mixed methods study on specific strategies and methods being employed in these schools was applied while using the socially justice lens of Latino critical theory in its analyses. This yielded data regarding teaching methods and strategies being used with the greatest impact in promoting academic outcomes for Spanish-speaking ELL students. These data may be useful in larger bodies of research for developing additive, inclusive, and culturally responsive education for ELLs across the state and the country.

Chapter 2

LITERATURE REVIEW

Introduction

Public education in the United States has an immense obstacle to overcome in facing the needs of students whose primary language is not English. While this issue has been present in U.S. schools since the 1800s, the problem of equitable access to a sound education has intensified (August et al., 2009). Current demographic trends across the country, bringing millions of students to our schools who speak other languages, challenge the foundation of our educational system. As the population of English language learners (ELLs) continues to grow exponentially, the inability of public schools to provide them with an adequate education has begun to drive reforms across the country (Baker & Lewis, 2015). The academic achievement gap between English speaking and non-English speaking students persists (Hemphill & Vanneman, 2011; NAEP, 2015), hastening the need for changes to the way we teach these students in order to provide them with greater access to academic success.

The accountability standards established in the No Child Left Behind legislation (2002) emphasized the struggle public schools faced in meeting proficiency goals for their diverse populations, and education professionals have scrambled to meet this challenge (Baker et al., 2014; Chen & Yildiz, 2010; Collier & Thomas, 2009; de Jong, 2010; Goldenberg, 2010; Markham & Gordon, 2008; O'Day, 2009). Across the states, there is a

myriad of examples of bilingual education methods and strategies being used to meet the needs of these unique learners with varying degrees of success (Collier & Thomas, 2009; Li & Edwards, 2010). A definitive solution to increasing low performance on standardized tests for all English learners, however, has not yet been discovered. Focusing on the data, which continue to show unyielding gaps between English- and non-English speaking students (National Clearinghouse for English Language Acquisition, 2015; NC Department of Public Instruction, 2015), instructional models being employed to promote the success of students acquiring academic proficiency have been used to define the potential of dual language immersion as a practice in our public schools. A comprehensive examination of the practices of bilingual education in the United States was necessary in determining the next steps for this study.

It is important to recognize common terminology being used regarding the issues of educating ELLs. Bilingual education (BE) is the umbrella term for programs designed to teach students whose primary language is not English. Dual language (DL) has evolved from this concept to denote specific programs that attempt to teach both the native language and English (National Clearinghouse for English Language Acquisition, 2011). Many variations of these two categories have emerged and will be discussed further in this chapter. García, Arias, Harris Murri, and Serna (2009) categorized terms used to refer to a student attending these types of programs as an English language learner (ELL) (or shorter, English learner [EL]), and limited English proficient (LEP). These terms are used interchangeably to refer to students whose primary language is other than English and whose English proficiency is not yet developed to a point where they can profit fully from English instruction or communication.

Drawing upon decades of experience across the country in regards to adapting to demographic trends and increases in ELL populations, comparative program studies are included in a review of the literature (Alanís & Rodriguez, 2008; August & Shanahan, 2006; Calderon et al., 1998; Cheung & Slavin, 2012; CREDE, 2006; DeJesus, 2008; Fortune & Tedick, 2015; Lindholm-Leary, 2012; Lindholm-Leary & Genesee, 2010; Mahon, 2006; NLP, 2006; Slavin & Cheung, 2005; Slavin, Madden, Calderón, Chamberlain, & Hennessy, 2011; Theoharis, 2007; Thomas & Collier, 1997, 2010). To fully analyze the issues surrounding this topic, multiple lenses will be applied to build a comprehensive framework for studying current trends in the field of educating ELLs. A focus on dual language program development being used and how this pedagogy promotes academic achievement for ELLs in North Carolina public schools included: legal history; population demographics; academic programs and initiatives; dual language immersion programs; student achievement data and academic success; and a sociocultural perspective on ELLs. This review of the literature targeted current best practices to identify the most effective strategies being used in two-way immersion programs. The theoretical framework applied throughout this study was equity and social justice with specific attention to the tenets of LatCrit theory, which allowed for analyses of how fairly the needs of Spanish-speaking ELLs were being met in providing adequate access to educational resources for their academic success.

A Legal History of Bilingual Education in the United States

A chronological review of prominent educational legal cases, legislation, and historical events were reviewed to establish a timeline for the development of bilingual education theory in the United States. This perspective highlighted shifts in the national consciousness of educating students who are limited English proficient (LEP). Court rulings

have set precedents for how states interpret their legal responsibilities, federal laws have offered a hard line on mandates required to be followed by educational agencies across the states. Descriptive explanations are segmented into the last three centuries, which include, but are not limited to, 18 notable national events regarding educational equity (see Table 2.1). Much of the historical perspective on educating ELLs is aligned with these events.

Table 2.1

A Historical Timeline of Educational Equity in the United States

#	Year	Legal Cases, Legislation, Historical Events
1	1848	Schools shift to subtractive philosophy in the Southwest
2	1894	<i>Plessy v. Ferguson</i> —“separate but equal” mandates established
3	1931	<i>Alvarez v. Lemon Grove</i> —school desegregation
4		<i>Independent School District v. Salvatierra</i> —Mexican-American student resources
5	1954	<i>Hernandez v. Texas</i> —all racial groups equal under 14th Amendment
6		<i>Brown v. Board of Education</i> —disclaiming of “separate but equal doctrine”
7	1960	Civil Rights Movement Begins—legal precedents established to defend minorities
8	1964	Civil Rights Act—“all men are created equally” and have inalienable rights
9	1965	Elementary and Secondary Education Act—advocacy for diverse students
10	1968	Bilingual Education Act—development of bilingual and ESL programs
11	1971	<i>Swann v. Charlotte-Mecklenberg Board of Education</i> —busing to integrate
12	1974	<i>Lau v. Nichols</i> —discrimination based upon language & <i>Lau</i> Remedies
13	1981	<i>Castañeda v. Pickard</i> —educational discrimination violating the 5th Amendment
14	1983	“A Nation at Risk”—report on educational responsibility for diverse population
15	1998	Proposition 227—Beginning of the “English-only Movement”
16	2000	<i>Florez v. Arizona</i> —failure to adequately fund English-learner programs
17	2002	<i>No Child Left Behind Act</i> —new federal accountability based on student test data
18	2009	<i>Horne v. Flores</i> —diminished funding and programs for language minority students

The 1800s

Even more than today, the early 1800s saw great immigration and diversity as people from all over the world began to realize that our borders were open and provided another option for their lives. Ovando (2003) argues that, over the course of the last two centuries, “language ideology in the United States, rather than maintaining a stable course, has shifted according to changing historical events” (p. 2). Ovando notes that during the second half of the 19th century there was a push to assimilate immigrants both culturally and linguistically in order to promote nationalism and quell public fears of European influences on our American culture. In 1848, schools established in the Southwest shifted from additive to subtractive Americanization in philosophy, meaning that the goal was to replace immigrant language and culture with English and the American dominant culture. This was followed by the sociopolitical period of “separate but equal” and “segregation” across the country, which further alienated speakers of any language but English in public schools across the United States. This began the struggle for non-English speakers residing in the United States to seek due process and the right to equal access (Ochoa, 2016). At the end of the century, the fight for desegregation was fueled by the *Plessy v. Ferguson* (1894) case, in which “separate-but-equal” mandates were supported and had become common in many states.

The 1900s

American ideologies about language and culture were highlighted in the *Naturalization Act of 1909*, which required immigrants to speak English in order to become naturalized U.S. citizens. As concerns about linguistic, cultural, and ideological competition increased with the influx of European immigration to the United States, settlers across the states clamored for the power to control institutions such as schools (Ovando, 2003). The

first landmark court case to challenge the segregation of their children from the public school was *Alvarez v. Lemon Grove* (1931), which established the first successful school desegregation court decision in the history of the United States. The *Independent School District v. Salvatierra* (1931), in which parents sued the school district for failure to provide Mexican-American students with the same resources given to White students, set precedents for Spanish-speaking student advocacy in the country. By 1954, the “separate-but-equal doctrine” established under *Plessy* was challenged in the U.S. Supreme Court in the case of *Hernandez v. Texas* (1954), resulting in the ruling that declared all racial groups equal protection under the 14th Amendment. *Brown v. Board of Education* (1954) disclaimed the validity of ‘separate but equal’ by ruling that, in the field of public education, the doctrine has no place; separate educational facilities are inherently unequal. This was the first landmark case to establish the expectation of measuring standards of inequality in schools and mistreatment of its students based upon race, creed, color, and religion. According to Ochoa (2016), “This decision established a new morality for the nation and for the principle of equal educational opportunity for all students” (p. 30). Though this landmark case set precedent and changed the way the United States looked at educating diverse populations, the reality of its promise would take decades to materialize in the institutions of public education. Colón-Muñoz and Lavadenz (2016) highlight this notion in their book, *Latino Civil Rights in Education: La Luche Sigue*, by reminding us that Latinos are the largest culturally and ethnically diverse group in the nation, expected to triple by the year 2050. Despite this, the dream for equal access, equal opportunity, and equal representation as depicted in *Brown v. Board of Education* is yet to be realized.

The Civil Rights Movement of the 1960s highlighted injustices brought upon minorities in the United States, and legal precedents being used in courts across the country to defend the rights of non-English speaking minorities were established. The proclamation that ‘all men were created equally’ and that we, as residents of this country, have certain inalienable rights resounded in courtrooms across the nation. This led to the *Elementary and Secondary Education Act* of 1965 (ESEA), which addressed issues of equal educational opportunity and spearheaded educational reform efforts, particularly for students who were marginalized and had low socioeconomic status (Zascavage, 2010). This Act prompted the development of Title VI of the 1964 *Civil Rights Act* which created a legal basis for non-discrimination in education. The Bilingual Education Act of 1968 of the ESEA, also referred to as Title VII, became landmark legislation in support of bilingualism in the United States. It provided federal funds for bilingual education and support for research, teacher training, technical assistance, a national information clearinghouse, curriculum materials development, and other aspects of program design and implementation necessary for innovative programs to teach ELLs (González, 2010). The rebirth of instruction in languages other than English also resulted from changes in immigration laws. The 1965 Immigration Act revoked the Naturalization Act of 1906, and larger numbers of Asians and Latin Americans started to enter the United States (Molesky, 1988).

As desegregation became the norm and educational opportunity was at the forefront of school districts and legislation across the country, *Swann v. Charlotte-Mecklenburg Board of Education* (1971) established that busing students across the district to achieve adequate integration was within the law. Ten years later, in the *Lau v. Nichols* (1974) case, a class action suit of over 1,800 Chinese student defendants was won by conferring the grounds of

discrimination based upon language. This raised the nation's awareness that educational opportunity for language minority students was not equitable (Jenlink, 2009). The *Lau* verdict had the overall effect of eliminating the sink-or-swim practices of the past and led to the passage of the *Equal Educational Opportunities Act* in August 1974. With this act, Congress affirmed the *Lau* decision and expanded its jurisdiction to apply to all public school districts (Ovando, 2003). The act stipulates that

No state shall deny equal educational opportunity to an individual on account of his or her race, color, sex, or national origin, by . . . the failure of an educational agency to take appropriate action to overcome language barriers that impede equal participation by its students in its instructional programs. (20 U.S.C. § 1703, as cited in Lyons, 1992, p. 10)

This placed more pressure on school districts to implement meaningful instruction for English language learners. The Office for Civil Rights issued the 1975 *Lau* Remedies, which represented a new level of federal requirements for addressing the needs of language-minority students. This specified suitable pedagogical strategies, the importance of moving ELLs into mainstream classrooms, and professional standards for bilingual teachers. According to the *Lau* Remedies, bilingual education should be implemented in all school districts that had at least 20 ELLs enrolled who represented the same language (Ovando, 2003).

The *Castañeda v. Pickard* (1981) Supreme Court case, in which Mexican-American children sued the Raymondville, Texas school district for failure to provide adequate bilingual education resulting in discrimination, furthered the *Lau* initiative (Ochoa, 2016). This case, generally considered the second-most important court decision influencing education in the English language, gave the public more specific guidelines to determine if school practices were in keeping with the spirit of *Lau*. It specifically delineated educational

practices which did not address language barrier as a violation of the 5th amendment (Lyons, 1992). Because of legislation during this era, many elementary bilingual education programs and English as a Second Language (ESL) programs were developed across the country. This led ethnically and linguistically diverse communities to advocate for themselves and their children for more supportive educational programs (Wiese & García, 1998).

The publication *A Nation at Risk* (Gardner, 1983), by which the public got wind of the report on the state of the nation by the Secretary of Education for the United States, T. H. Bell, resulted in a nationwide panic regarding the diversity which had swept across our land. Politicians and public policy officials everywhere began to scramble to meet with legal representatives and school boards to see how school systems were failing the American population (Ovando, 2003). Granted, the impetus was to become knowledgeable about what schools were, and more importantly were not, providing for the American people in the way of education; yet, the scare sent tremors across the states that urged administrators to establish systems and parameters on education in their districts. In reaction to this largely publicized literature, school districts began formulating programs to better teach English to linguistically diverse students. Both bilingual education and English-only programs began to gain a great deal of momentum in schools serving diverse populations (Gardner, 1983).

The *English-Only* movement marked the beginning of attempts to dismantle bilingual education and began to emerge in California to address tensions regarding the treatment of language minority students. Administrators, teachers, parents, and ELL students had become wary of the methods being used in bilingual education models which isolated them in their schools (Parrish et al., 2006). During a race for governor, republican candidate Ron Unz introduced Proposition 227, also known as “English for the Children.” This proposition

supported subtractive methods by requiring that English be the primary language of instruction in public schools across the state. This was passed in 1998 and became the topic of great debate among the educational community. Subsequent propositions mandating English-only instruction have emerged in other states, including Arizona with Proposition 203 in 2000 and Massachusetts in 2002 with the “Question 2 Initiative” (Ochoa, 2016). According to language education research, the effectiveness of the English-only movement has been shown to offer no advantages to students learning English, is a subtractive model that aims to fully assimilate English learners into the English-dominant culture, and in some states has been ruled unconstitutional (Baker et al., 2014; Parrish et al., 2006; Slavin & Cheung, 2005; Wright, 2005a). Another side effect of this type of instruction, as stated by Downey (2008), is that “Integration and/or immersion may force students to compromise their total education just to acquire minimal skills” (p. 130). Parrish et al. (2006) found little empirical evidence that supported the move to Proposition 277 and the English-only movement.

The Early 2000s

Legal pursuits continue to be waged for fair and adequate educational services to immigrant students. In *Flores v. Arizona* (2000), the state was cited for civil contempt for failing to adequately fund English language learner programs in violation of the Equal Education Opportunities Act. On appeal, Arizona argued that under No Child Left Behind legislation, the federal policy altered the foundation of the district court’s original ruling, therefore arguing that their efforts were now viewed as adequate to resolve program deficiencies. While the federal district court of Arizona denied the motion, the U.S. Court of Appeals ruled in favor of Arizona in the case of *Horne v. Flores* (2009) and affirmed that

Arizona had fairly complied with the original order. This ruling resulted in funding and program resources for the educational needs of language minority students to be diminished.

The No Child Left Behind Act of 2001 (NCLB) was an updated version of the Elementary and Secondary Education Act of 1965, initiated by President George W. Bush, which aimed to “close the achievement gap between low- and middle-income students, to ‘disaggregate’ the average achievement scores and state accountability programs, and to expose student educational inequity over the past several decades” (Ochoa, 2016, p. 42). While the English language learning community garnered much more attention than ever before, the benefits of the new focus on their achievement were minimal. Being held accountable for test scores of students who could not read or write the English language, as measured by the Adequate Yearly Progress (AYP) stipulation in the NCLB, placed a great deal of stress on schools (Crawford, 2004). Assessment expert Escamilla (2006) states, “The use of wide-scale testing is now the predominant means by which schools and districts demonstrate that they are meeting the mandates of *No Child Left Behind* and the standards-based movement” (p. 185). Administrators quickly searched for ways to improve non-English speaking group performance, or to somehow keep their test scores from negatively affecting their schools’ and districts’ overall AYP ratings. This resulted in public schools teaching to state normed tests and working to improve only what standardized tests can measure. Under Title III of NCLB, the Bilingual Education Act of 1968 was replaced, focusing on English acquisition rather than bilingual education (Ochoa, 2016). The results of NCLB on public education was to cause a dramatic change in the way school systems operate in the United States (Crawford, 2004). In a critique by Ravitch (2011), public

education in American schools is failing and the reforms aimed at improving student success are diminishing its quality.

Demographic Trends of English Learners

In *The New Demography of American Schools*, Capps et al. (2005) outlined demographic trends in the United States, projecting strong growth in the English language learner (ELL) population across the country. It is estimated that the number of students representing learners of English populating schools across the United States totaled over five million (Viadero, 2009). According to current statistics, the National Clearinghouse for English Language Acquisition (2015) reported that the number of school age children with a home language other than English was approximately one in every six students enrolled in public schools. In addition, for children who speak a language other than English at home, over 80% are U.S.-born or naturalized U.S. citizens, while 77% of Hispanic ELLs were born in the United States and another 5% are citizens through a parent or naturalization. The continuous expansion of ELLs across the United States has become noted in public records for over three decades and continues to attract attention from educational communities and policymakers across the country.

Reports from the Center for Public Education (2011) highlight the growth trends for English learners: in 1990, 32 million people over the age of five in the United States spoke a language other than English in their home, which comprised 14% of the total U.S. population; by the year 2000, with a 47% growth to almost 47 million people, this group comprised nearly 18% of our country's total population. The growth of this group of learners in public schools across the United States affects demographic regions differently in regard to the size of their ELL enrollments. The Western region represented the most ELLs in our

country. An increase of 616,000 students from 1993 to 2000 was noted, and the number of ELL students grew by nearly 900,000 between 2000 to 2010 and continues to expand (National Research Council, 2011). The sharp increase in the number of students identified as ELLs has had a profound influence on the expansion of bilingual programs in some states and has put pressure on schools to maintain accountability standards despite the shifts in their demographic composition (Center for Public Education, 2015). According to the Migration Policy Institute (2016), the ELL student population in the United States had grown to 53.8 million in 2014. Likewise, the number of non-English speakers in schools has almost doubled since 1990 and continues to increase the percent of the total U.S. population comprised by this group (see Figure 2.1). Within the same time frame, the LEP student population had grown to over 25 million, comprising nearly 9% of the U.S. population. This growth is reflected in elementary and secondary student populations across the country and has become part of this nation's heritage.

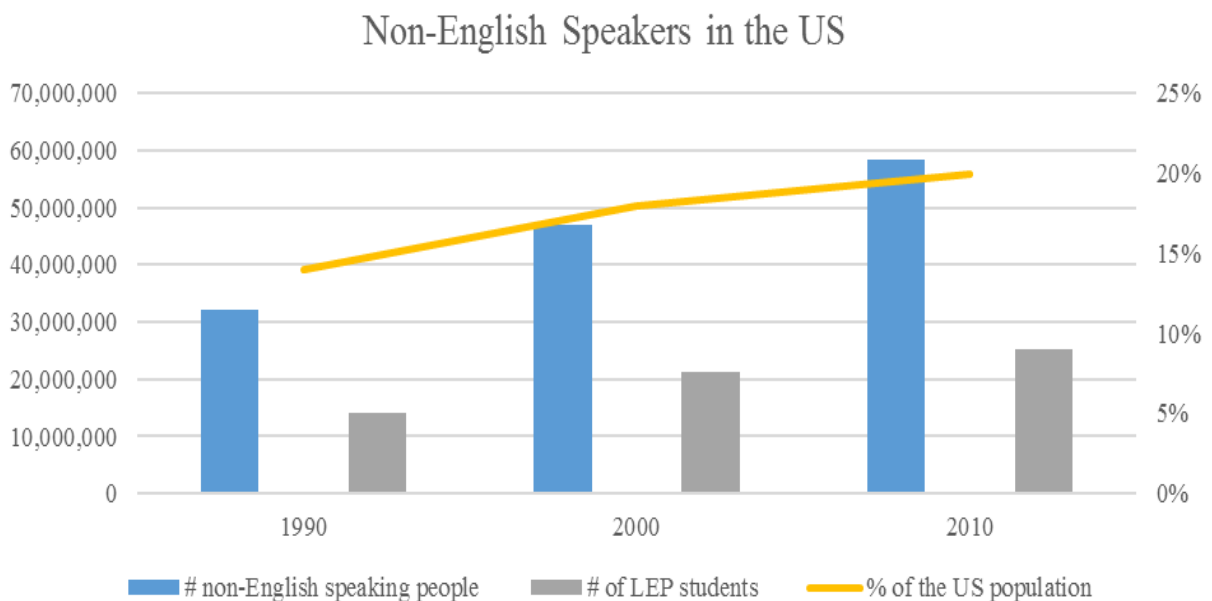


Figure 2.1. Growth of non-English speaking and LEP population 1990-2010. Source: Migration Policy Institute (2016).

While the growing number of immigrant residents in the country is indicative of a demographic shift, the percentage of these immigrants who are non-English speakers has had an impact on schools and is factored by their proficiency, or ability to perform in English. This is delineated by testing in early elementary school and identified by the label of LEP, or Limited-English proficiency (Liggett, 2013). The number of English language learners with limited proficiency in the United States grew from nearly 14 million in 1990 to about 25.3 million in 2011, representing an 81% increase. In terms of percentage of the population identified with limited English proficiency, about 6% of the U.S. population was LEP in 1990, 8% was LEP in 2000, and 9% in 2011 (Watley & Batalova, 2013). As noted by the Migration Policy Institute (2016), in the year 2014 there were 53.8 million students enrolled in public schools between the ages of 5 and 18. Of this population, 25.6 million spoke a home language other than English. In the same year, North Carolina reported 85.6% of all LEPs in the state as Spanish speaking, while nationally, 70.2% of all LEPs spoke Spanish in the home.

It is critical to consider the primary language spoken when formulating conceptual shifts in educational pedagogy for the purpose of teaching English learners. The Migration Policy Institute (2011) recorded Spanish as the number one language spoken by LEPs in the United States with 85% of the population denoting Spanish as their home language on the Census Bureau's 2011 American Community Survey (see Figure 2.2). The numbers shown refer to LEP students, ages 5 to 18, who were enrolled in school during the 2010-2011 school year. LEP students comprise a portion of the students within the ELL population who require accommodations in their individual education plans to address the barriers presented due to a lack of language acuity in the academic environment. Other languages showing the highest

representations were German and French, each representing roughly 2.8% of ELLs, and both a miniscule fraction of the population in relation to the Spanish-speaking majority.

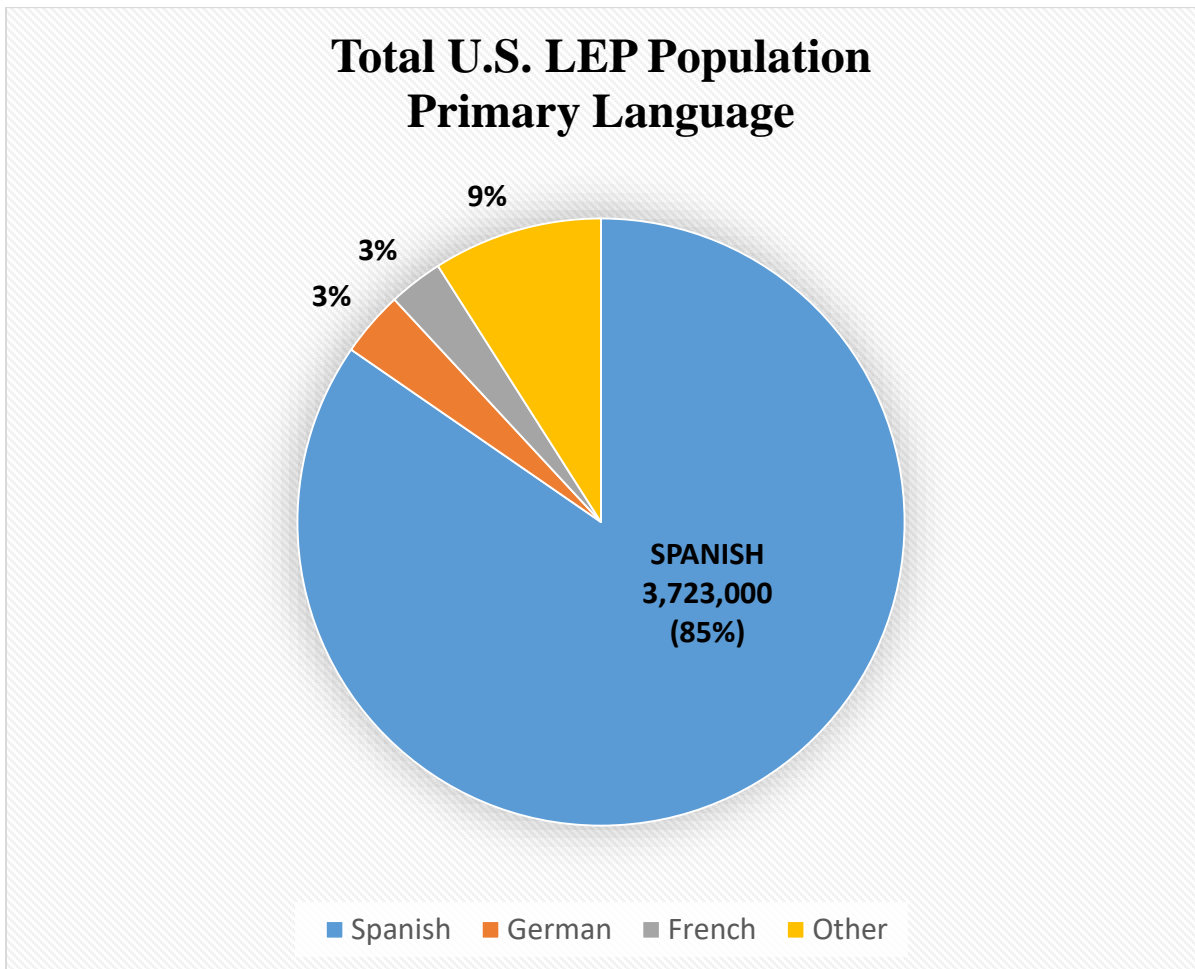


Figure 2.2. Primary languages spoken by LEPs in the United States, 2011. Source: MPI Analysis of the 2011 US Census Bureau's ACS.

According to Rossell, Snow, and Glen (2000), teachers in American schools deal with a wide range of native languages in the classroom, thus making the ability to reach ELLs even more difficult. Regions exposed to one or two predominant languages in their ELL population can identify a target language for which to provide both tangible and human resources. This can result in promoting greater development of the second language, such as offering translations, dual language programs with instruction in both the second language

and English and providing schools with dually certified educators who can adequately deliver instruction using DL methods.

Researchers across the nation agree that, by far, the greatest percentage of ELLs in the United States is Spanish speaking (Batalova, 2010; Capps et al., 2005; Meyer, 2004; Passell, 2008; Thomas & Collier, 2012). Thirteen states in the country reported that 80% or more of their ELLs speak Spanish as their predominant language; Wyoming has 97.3% at the top of the spectrum, and Texas and North Carolina report 91.7% and 89.5%, respectively. The western region of the United States reported equally high Spanish-speaking ELLs with California at 92.2% and Nevada at 96.6%; Idaho and Colorado also claimed high percentages at 89.5% and 91.5%, respectively. Overall, there were only seven states in the United States that did not show a majority ELL population as Spanish speaking including Montana, North Dakota, South Dakota, Maine, Vermont, Hawaii, and Alaska (Migration Policy Institute, 2011). In a study conducted in North Carolina by Thomas and Collier (2010), 84.2% of LEP students were Hispanic. They believed that this strong trend in a predominant language may offer an advantage to making changes in the paradigm of educating ELLs in the United States. Resources to provide a sort of language ‘bridge’ for regions with a strong language dominant population may provide some answers, yet many areas of the country face an even greater challenge to juggle many native languages at the same time.

Equally notable regarding the implementation of educational reforms to address the evolving demographic needs of ELLs is the continuous climb in their percentage of school-aged children. In 1970, almost 7% of students attending public schools in the United States were children of immigrants, and by the year 2000 the percentage had increased to 19% (NCES, 2009). According to the National Clearinghouse for English Language Acquisition

(2002), the number of LEP students grew nearly 400% from the 1995-1996 to 2005-2006 school years. Between 1998 and 2009, while Pre-K through 12th-grade enrollment increased 7.22% across the nation, ELL enrollment rose to more than 51% with more than 5.3 million ELLs attending our public schools. The density of these populations was greatest in the western and southwestern regions, yet over 200% growth has been noted in many southeast and eastern states, including North Carolina. Projections for growth in the immigrant population will repeat the trends over the past 50 years and are expected to increase exponentially. By 2050, nearly one in five Americans, or 19%, will be an immigrant, compared to one in eight in 2005. Another projection made was that over 25% of all Americans will be represented by the Latino subgroup (National Clearinghouse for English Language Acquisition, 2011). The U.S. Census Bureau (2011) stated that the proportional shares of the Latino subgroup will shift quite dramatically. It is estimated that by the year 2050 less than 53% of the people living in our country will be non-Hispanic White, yet they will still maintain the majority. Over the next four decades, educators will need to take into account the ever-changing face of the students who will fill the classrooms in U.S. public schools.

Academic Programs and Initiatives Targeting ELLs

It is crucial to explore some of the unique characteristics that English learners possess when attempting to develop pedagogy aimed at better serving their educational needs. The time it takes to become proficient in a second language becomes a factor with both academic and social consequences. As statistics have shown, the percentage of ELLs represented in school-aged populations continues to climb, creating a pressing issue for educational leaders to find ways to meet their needs. Currently, it takes an average of 4-7 years for ELL students

to become proficient in academic English, the language needed to succeed in U.S. classrooms (Cech, 2009; Collier & Thomas, 2009; Meyer, 2004; National Clearinghouse for English Language Acquisition, 2011). Measures used to test this proficiency rate vary in style and accuracy and are often based on oral proficiency, which may not guarantee readiness to succeed in English-only classrooms. Across the states, at least 24 different English language proficiency tests are used, which means an ELL in one state might be labeled English proficient in another state, negating interstate comparisons. These inconsistent definitions may also lead to classification errors and negative consequences for ELLs (Kopriva, 2008).

Program models for educating English learners vary and have been categorized as either subtractive or additive models (Lambert, 1990; Roberts, 1995; Simons & Connelly, 2000). While subtractive models—which many early bilingual programs were formulated upon—seek to replace the student’s first language with the second dominant language, additive models include programs which help students to maintain their first language while acquiring a second one (Slavin & Cheung, 2005). According to Jenlink (2009), additive models usually encompass pluralistic goals which affirm individual and group language rights and support group autonomy, while subtractive models typically have goals of assimilating the minority speakers into the dominant language and culture. Further evidence suggests that formal schooling in one’s primary language tends to promote English literacy skill development. There has also been support for additive models which embrace socially just and LatCrit sensitive pedagogy to meet the unique needs of ELLs

Of the many resources and methods being applied in an attempt to provide an adequate education to our ELL population, currently the most widely used method across the country is the subtractive approach of ‘English as a Second Language’ (Center for Public

Education, 2011, 2015; Office of English Language Acquisition, 2008). The main goal of English as a Second Language (ESL) programs is to develop English proficiency while students learn content. Districts and states employ a wide variety of methods to implement this educational model. Some of the core components to the standard curriculum for ESL teachers are common to the dual language classrooms and other bilingual programs. Experiential learning and authentic application support knowledge acquisition in lessons carrying both content and language objectives. Scaffolding the materials and using visual or non-linguistic representations to improve comprehension are anchor tools commonly used by teachers in all instructional delivery models targeting ELLs (Pienemann & Johnston, 1987). The differences between regular classroom instruction, ESL small group instruction, and dual language instruction are vast and highlight how non-English speaking students acquire the content knowledge very differently in each of the respective models.

There are many examples of specific methods and strategies being developed to provide more effective practices for teaching ELL populations in the United States. According to the National Clearinghouse for English Language Acquisition (2011), the various programs that have been applied to target ELLs in the United States have had varying degrees of overall effectiveness in teaching reading (see Table 2.2). Each of these programs establish either a subtractive model which focus on developing the target language (L2), or an additive model which aims to maintain the primary language (L1) while also developing skills and proficiency in the target language (L2). The most common types of second-language programs are described below.

Table 2.2

Types of Second-language Instructional Programs

Program Title	Program Descriptors	CATEGORY/ Effectiveness
Dual Language Two-way Immersion (TWI)	<ul style="list-style-type: none"> • Develop proficiency on both languages (L1 & L2) • Includes English speaking and other speaking students • Typically applied K-5 • More politically acceptable in the US 	ADDITIVE <i>Most effective</i> (for both L1 and L2 students)
Dual Language One-way Immersion (DL)	<ul style="list-style-type: none"> • Develop one language group proficiency in two languages • DL immersion is the same as TWI • Less politically acceptable in the US 	ADDITIVE <i>Most effective</i> (for L1 students)
Heritage Language Program (HLP)	<ul style="list-style-type: none"> • Teachers dually certified in both languages • Goal is literacy in two languages • Used mainly with American Indian students in the US 	ADDITIVE <i>Very effective</i> (for limited populations)
Early Exit Transitional (EET)	<ul style="list-style-type: none"> • Instruction begins in L1 but rapidly moves to English • Intended to develop English skills quickly • Transitioned to mainstream classrooms quickly 	SUBTRACTIVE <i>Moderate effectiveness</i>
Sheltered Instruction Observation Protocol (SIOP)	<ul style="list-style-type: none"> • Goal is English proficiency • Instruction is given in English only • Various language backgrounds can be taught together • Instruction can supplement other teaching methods 	SUBTRACTIVE <i>Moderate effectiveness</i>
Late Exit Transitional (LET)	<ul style="list-style-type: none"> • Develop some L1 skills and proficiency at the same time as L2 development for strong skill and proficiency transfer to English • Transitioned to mainstream classrooms by 2nd grade 	SUBTRACTIVE <i>Less effective</i>
Structured English Immersion (SEI)	<ul style="list-style-type: none"> • LEP students in class alone • Goal is fluency in English • Instruction in English, adjust to individual abilities • Teachers must have receptive skills in L1 	SUBTRACTIVE <i>Limited effectiveness</i>
English Language Development (ELD) or English as a Second Language (ESL)	<ul style="list-style-type: none"> • Goal is fluency in English • Use pull-out model; separate students from mainstream • Focus on grammar, vocabulary, communication • No content instruction is given in pull-out setting • No support offered for students' L1 • ESL Push-in model differs slightly 	SUBTRACTIVE <i>Least effective</i>

Note. Source: Office of English Language Acquisition (2008). *Biennial Report to Congress on the Implementation of Title III State Formula Grant Program, School years 2004-2006*. Washington. D.C.

English as a Second Language (ESL) methods have been employed as a primary means to improve acquisition of language and content mastery across the United States with limited success. These focus on teaching strategies to master the English language rather than developing content mastery, and often are done in isolation from the mainstream population. It is currently noted as the least effective program, other than English-only instruction, for improving academic success in ELLs (Center for Public Education, 2015; National Clearinghouse for English Language Acquisition, 2011; Thomas & Collier, 1997). The program showing the greatest success in teaching both the English-speaking and non-English speaking students simultaneously is dual language two-way immersion (Office of English Language Acquisition, 2008; Thomas & Collier, 2012; Viadero, 2009).

A common practice in the ESL model is teaching grammar by means of activities that give ELLs opportunities to produce sentences containing the targeted structure. These often consist of mechanical pattern-practice drills using an audio-lingual method or situational grammar exercises in which the target structure is contextualized in terms of some real or imaginary situation. The underlying assumption of both types of activity is that having learners produce the structure correctly and repeatedly helps them learn it better (Ur, 1988). This traditional approach exhibits a number of key problems for acquiring academic English. Research on second language acquisition has shown that learners pass through a number of stages en route to acquiring the ability to produce a target language structure; grammar teaching often does not alter this sequence (Valenzuela, 2010). Teaching learners to produce a target structure that they are not ready to produce may not work (Ellis, 1993; Pienemann & Johnston, 1987). Also noted as a negative reinforcement practice is asking learners to

produce grammatical structures they find difficult and then correcting them when they make mistakes (Krashen, 1992).

An alternative approach to grammar teaching offered by noted scholar Ellis (1993) is to design activities that focus language learners' attention on a targeted structure enabling them to identify and comprehend the meaning(s) of this structure. This approach emphasizes input processing for comprehension rather than output processing for production and requires the use of what is termed *interpretation tasks* to replace traditional production tasks.

According to professional educator Nunan (1995), the gap between teaching and learning in the experiential content domain can be narrowed by using a learner-centered approach to pedagogy. This focuses on the experiential content, the learning process, and the language content together to promote student success. The targeted outcome of vocabulary and grammar development, however, is to improve understanding of academic writing and support ELLs in all content areas (Hinkel, 2003).

Houston Independent School District, in keeping with state policies of English-only instruction, implemented pedagogy and practice which mainstreamed its ELLs into English-only classes for the entirety of their education. As pointed out by Collier and Thomas (2009), "often parents and community members are convinced that English learners should only attend the English mainstream, thinking that it will help their children learn English as fast as possible" (p. 27). This practice of all-English instruction with no alternative language supports is referred to by many researchers as *submersion* (Thomas & Collier, 2012). The achievement of ELLs in dual language programs compared to English submersion programs was analyzed in a long-term study by Thomas and Collier (2012). They compared the normal curve equivalents (NCE) in reading achievement for ELLs on norm-referenced reading tests

using three different classroom programs: two-way dual language; one-way dual language; and submersion (see Figure 2.3). Results showed that the performance of ELLs in dual language (DL) programs shows steady increase from grades one through eleven, surpassing typical native English speakers in the upper grades. The *submersion* students who were enrolled in English mainstream tested on grade level with their English-speaking peers after four years of all-English schooling, yet by fourth grade, the lack cognitive development in their first language negatively influenced their test score results as the test complexity increased at each grade level. This group fell well below students who participated in DL programs offered by the Houston Independent School District, and by high school, though there were few students left to be tested, those who remained in school scored below their second-grade level scores.

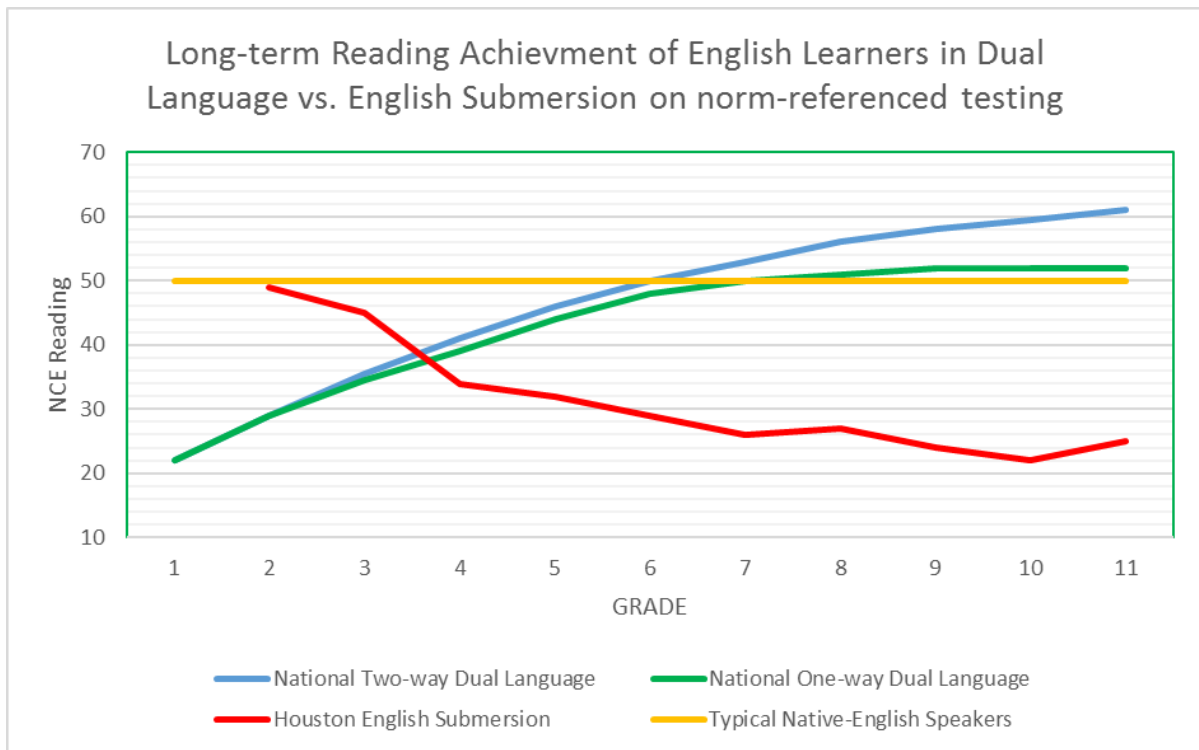


Figure 2.3. Comparison of reading achievement in 3 ELL programs. Adapted from Thomas and Collier (2012).

This chart is an example of the consistent decline in the mainstreamed ELLs versus those who are instructed in dual language programs, with two-way DL showing the greatest increases in achievement. Choosing mainstream English is the worst possible choice, as it leads to the lowest achievement over time and includes a high percentage of dropouts (Thomas & Collier, 2012). “As reliance upon foundational language skills increase at each grade level, a lack of concrete knowledge skills required to excel in literacy instruction correlates with the inability to perform successfully and maintain achievement scores which are aligned with their peers” (p. 60). While both two-way and one-way dual language immersion instruction focus on developing literacy skills in students’ primary language, submersion denies any instruction in the primary language.

Another method developed to meet the academic challenges of ELL students is done through a variety of strategies covered under the umbrella of “sheltered instruction” (Echevarria, Richards-Tutor, Canges, & Francis, 2011). Language development is a key component of this concept, which helps to make grade-level content accessible to students (Lindholm-Leary, 2008). The Sheltered Instruction Observation Protocol (SIOP) model, which simultaneously teaches ELLs academic content and English, was developed by researchers Echevarria and Vogt at California State University-Long Beach, in coordination with Short, a researcher at the Washington-based Center for Applied Linguistics (Cech, 2009). Programs of this type are supported by the World Consortium for English Language Learners through use of their common assessment of proximal language development through developmental stages of the World-class Instructional Design and Assessment (WIDA) tests. These annually administered English acquisition tests are given from the beginning of students’ educational careers in United States school systems to measure levels

of comprehension and application of the target language through listening, speaking, reading, and writing assessments (Center for Applied Linguistics, 2014).

Many schools across the country have chosen to apply the concept of *immersion* as a means to address the increasing diversity of English learners in our states. School administrators working in such states as California, Arizona, and Texas have had more years of experience working with large numbers of immigrants from the south coming to their schools than many states that are more recently beginning to address the issues posed by this population (Lindholm-Leary, 2012). While there is no program yet identified that results in a quick assimilation to the English language, many ways of addressing the needs of this unique group of learners have been applied in attempts to improve overall student performance. The role of administration in this dilemma increases as the programs targeting ELLs prove to be ineffective (Jenlink, 2009). Concepts of central office transformation recommend that district leaders become intrinsically involved in transforming teaching and learning to implement sound strategies, and that these leaders are visible across all of their schools. Guidelines for building leadership qualities from the central office and infusing that in administrators and teachers with uniformity and fidelity should be provided to establish sound practices for addressing large-scale issues, such as the teaching methods of ELLs (Honig, 2010).

Dual Language Immersion Programs

Many different methods and programs have been developed in an attempt to better educate learners who come to the United States with limited skills in speaking English. The challenge this poses is monumental, but there is some evidence to support the efforts of dual language immersion practices which give instruction in both the students' primary language and in English simultaneously. Research shows that ELL students with formal schooling in

their first language tend to acquire English faster than their peers without first language literacy skills (August & Shanahan, 2006; Echevarria, Short, & Powers, 2006; National Clearinghouse for English Language Acquisition, 2011; Slavin, 2010; Thomas & Collier, 2002; Ur, 1988). Programs and methods are being implemented to address the academic achievement deficit of ELLs in schools across the country, yet the unique sets of barriers to their academic success poses a great challenge in developing a systemic solution for addressing the needs of our English learners (National Clearinghouse for English Language Acquisition, 2011). Although some debate lingers, dual language education programs seem to show the most promise in raising the achievement level of ELLs (August & Shanahan, 2006). This conclusion is also supported by meta-analytical studies that compare bilingual education programs to English-only programs (Rolstad et al., 2005; Slavin, 2010; Theoharis & O'Toole, 2011; Thomas & Collier, 2002).

A longitudinal study on the effects that three program models had on students' long-term academic success showed marked difference in the performance of students by the end of high school (see Figure 2.4). ELL students in a 50-50 bilingual program outperformed their peers in both the English-only model and the ESL-content only model by the end of high school (Thomas & Collier, 2002). The program used a 50-50 model, which coupled first language (L1) literacy instruction in beginning years with a balance of content instruction in English. In a variety of implementation models, the recognition that native language literacy is a key component to greater acquisition of subject content and academic proficiency in the target language (L2) drives the instruction in dual language classrooms (Solórzano, 2008). Studies show that both language skill and conceptual knowledge in L1 translate to greater academic success in English (Collier, 1995; Slavin & Cheung, 2005; Thomas & Collier,

1997). Furthermore, programs that focus solely on the development of the English language through reading to the exclusion of development in speaking, listening, and writing are insufficient in supporting ELLs academic success (Callahan & Gándara, 2014). Immersion programs address the language barrier in a different way, emphasizing instruction and application of native language as a primary focus.

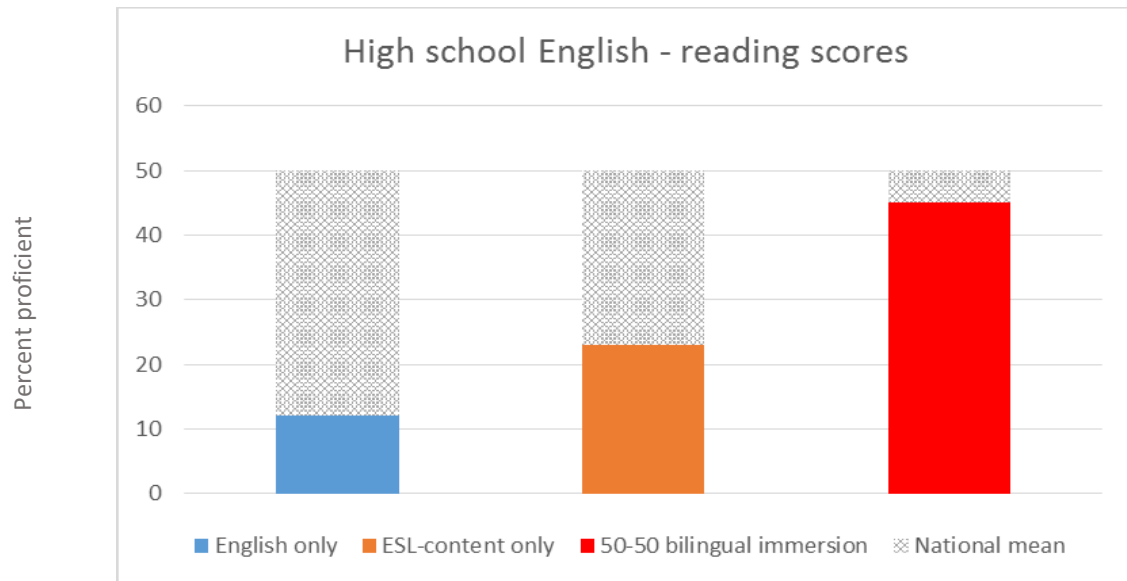


Figure 2.4. ELLs with 50-50 bilingual instruction performed best. Source: Thomas & Collier, 2002.

According to Thomas and Collier (2012), leading researchers on dual language and ELLs in the United States, there is evidence to show that dual language immersion education offers greater results than other programs (see Figure 2.5). They suggest that long-term achievement is greatly enhanced when students receive instruction in their heritage language during their first years of assimilation into an English-speaking school system in the United States. Results of their studies depicted in Figure 2.5 show that ESL strategies were the least effective on student academic proficiency, although they recognized that this program model allows ELLs better access to their education than being placed in English-only settings

within their schools. Programs such as Transitional bilingual education (BE) and sheltered instruction (SIOP) offer initial success in early elementary grades, but the long-term achievement declines after third grade, causing the gap between non-English and English-speaking students to persist. Notably, two-way immersion (TWI) programs, also called two-way developmental bilingual education, allow for student groups of English learners and English speakers to be taught both languages in a shared learning environment to promote the greatest long-term success for ELL students.

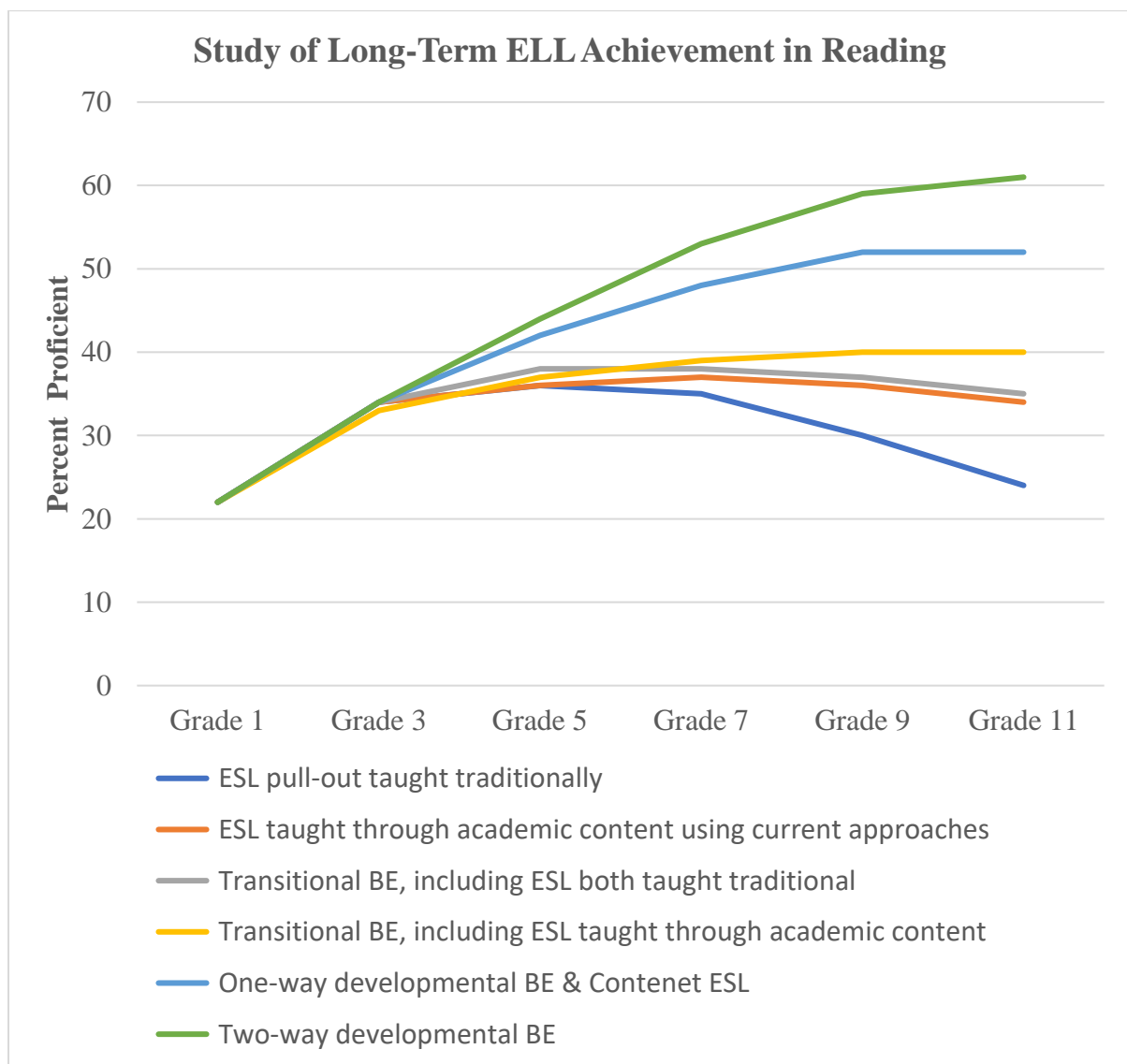


Figure 2.5. ELL reading achievement in program models. Source: Collier & Thomas (2012).

There have been numerous empirical studies and meta-analyses to evaluate the outcomes of immersion strategies developed over the past 20 years, and many show the same kind of results (see Table 2.3). When reviewing the effectiveness of DL practices, the majority found that ELLs performed at or above their peers on standardized assessments of reading proficiency. Also noted were the benefits that ELLs received from the use of instruction in their native language to support English learning (Calderon et al., 1998; Thomas & Collier, 1997), while many studies that followed focused on the proficiency levels of students who spent years in DL immersion programs. Landmark meta-analyses conducted by Slavin and Cheung (2005), August and Shanahan (2006), the Center for Research on Education, Diversity, and Excellence (2006), and the National Literacy Panel (2006) concurred results that support the use of DL instructional strategies to enhance language acquisition for ELLs and improve their reading proficiency. Also noted by several studies were the additional factors which promoted the success of the DL programs including; the need for instructional modifications for ELLs; pedagogical equity; qualified bilingual teachers and professional development; strong involvement of parents; and the need for knowledgeable leadership (Alanís & Rodriguez, 2008; Center for Research on Education, Diversity, & Excellence, 2006; Lindholm-Leary and Genesee, 2010; National Literacy Panel, 2006; Theoharis, 2007; Thomas & Collier, 2011). The information gained from these studies spearheaded more in-depth research regarding TWI program effectiveness and the resultant assessment scores of the population of students enrolled in these programs across the United States.

Table 2.3

Current Data Supporting Dual Language Programs

Year	Author	Length of Study	Student Sample	Purpose	ELL reading proficiency	
					Results	At or above non-DL peers
1997	Thomas & Collier	5 years	700,000 ELLs	Determine effectiveness of DL programs for language minority students	DL students take 4-7 years to reach 50th NCE in L2, while ELLs with English-instruction only take 7-10 years; instruction in L1 supports learning in L2	N/A
1998	Calderon et al.	2 years	222 2nd & 3rd grade Spanish-dominant students	Administration of a bilingual cooperative integrated reading and composition literacy intervention	The students who were matched on demographics and pretests had extremely positive results (effect size +0.54) on the post-assessment of English reading and academic skills	YES
2005	Slavin and Cheung	5 years	17 experimental studies included	Focusing on elementary reading for Spanish-dominant students, assessment outcomes were compared of DL and English-only programs	12 out of the 17 studies favor bilingual approaches to teaching reading and 5 found no difference—none favored English-only; paired bilingual strategies that teach reading in the native language and in English at different times of the day were especially effective	YES
2006	August & Shanahan	Peer-reviewed journals 1980-2002	293 studies approximately 1800 children are reviewed	Review of current research on developing literacy in second-language learners and develop a research agenda to address key knowledge gaps in the data	Teaching ELL students in their primary language compared to teaching them in the second language (L2) only boosts reading achievement in L2; bilingual education using TWI promotes academic achievement in students' second language	N/A

Table 2.3

Cont.

Year	Author	Length of Study	Student Sample	ELL reading proficiency		At or above non-DL peers
				Purpose	Results	
2006	CREDE— Center for Research on Education, Diversity, & Excellence	2 years	200 quantitative studies used in meta-analysis	Evaluate effects of DL programs for English language & literacy development, content area achievement, and English test scores for ELLs—United States only study	More first-language (L1) instruction over more years leads to higher levels of ELL achievement in English *Also concurred the three results of the study conducted by NLP (below)	YES
2006	Mahon	2 years	200 elementary ELLs	Use of English proficiency as predictor for academic achievement; extent Spanish achievement predicts English achievement	Language proficiency and Spanish scores positively relate to English achievement	N/A
2006	NLP— National Literacy Panel	3 years	300 empirical studies used in meta-analysis	Evaluate the influence of DL instructional models on literacy and oral language development in first language (L1) – worldwide study	1) Reading in L1 promotes English reading achievement; 2) Good instruction and curriculum is equally important for ELLs; 3) English learners require instructional modifications when instructed in English	N/A
2007	Theoharis	3 years		Through the use of inclusive services restructuring for ELLs, complete integration into mainstream classes was done using dually certified teachers, reduction of class sizes, and intense professional development	Reading achievement rose significantly from 50% proficient or advanced to 86% for all students; ELL achievement rose from 17% to <95% proficient or advanced	YES

Table 2.3

Cont.

Year	Author	Length of Study	Student Sample	ELL reading proficiency		At or above non-DL peers
				Purpose	Results	
2008	Alanís & Rodríguez	10 years	321 K-5th-grade students	Explore the factors that may have contributed to the success and sustainability of one TWI program in and inner-city diverse school	Program success was attributed to pedagogical equity, qualified bilingual teachers, active parent-home collaboration, and knowledgeable leadership; academic data confirms that the length of time spent in the program positively correlates with student academic achievement	YES
2008	DeJesús	7 years	550 K-4th-grade TWI students, both ELL and English dominant (ED)	Data review of the effectiveness of the implementing a Federal Grant-funded School Improvement pilot DL program; ten years prior this school had been taken over by the state DOE due to long-standing underachievement	ELL and ED students placed in the DL pilot program were compared to students in general education classrooms and in transitional bilingual classrooms; state reading tests results show all students in DL program outperformed their peers in the other classrooms by year 4; DL students in year 7 have the highest test scores in the state	YES
2010	Lindholm-Leary and Genesee	7 years	659 Hispanic students in 4 schools	Examine how participation in TWI programs in segregated or predominantly low SES schools perform on standardized tests compared to their native English-speaking peers	Hispanic students in the TWI programs achieve at similar or higher levels compared to their mainstream peers on tests in English; students achieve above grade-level on assessments in Spanish	YES
2010	Slavin et al.	5 years	3 successive years of kindergartners	These students were randomly assigned to transitional bilingual education or English only conditions and followed through 4th grade to evaluate program effectiveness	Spanish-dominant students learn to read English equally well in both programs, and immersion students also learn to read Spanish	YES

Table 2.3

Cont.

Year	Author	Length of Study	Student Sample	ELL reading proficiency		At or above non-DL peers
				Purpose	Results	
2011	Thomas and Collier	3 years	5 districts in North Carolina with DL elementary schools	Effectiveness of TWI programs for English language learners	Overall, reading and math scores in TWI education are higher for all students regardless of race, SES, LEP or special education status	YES, by middle school
2012	Cheung and Slavin	2 years	13 qualifying studies; 2,000 elementary students	Review English reading outcomes of Spanish-dominant ELLs in elementary schools across all types of programs	Overall findings indicate positive effect in favor of DL education; largest and longest-term evaluations found no difference between transitional Spanish-to-English and English-only programs	N/A
2012	Lindholm-Leary	3 years	Synthesis of dual language education (DLE) TWI research	Highlight the success of DLE for student participants, both ELLs and native English speakers (NES); identify and discuss challenges to implementation of dual language programs	1) DLE programs promote successful outcomes for both ELLs and NES participants; 2) Students develop high levels of proficiency in two languages; 3) DLE successful outcomes extend to students of diverse cultural, socioeconomic, linguistic, and special needs backgrounds; 4) Challenges in program design, accountability, curriculum & instruction, and bilingual language development must be implemented according to principles associated with high quality programs	YES
2015	Fortune & Tedick	2 years	218 K-8 English proficient students in 4 Spanish TWI programs	Used assessments developed by the Center for Applied Linguistics (CAL) to examine oral proficiency in TWI students compared to their peers not enrolled in an immersion program	Ratings of student proficiency were significantly higher than their academic peers between kindergarten and 2nd grade and between 2nd grade and 5th grade; there were no significant differences found between grades 5 and 8	YES in grades 2 through 5

A study conducted in North Carolina by Thomas and Collier (2010) also included demographic, special education, and socioeconomic factors, and showed strong reading growth for all subgroups being taught in TWI programs. They concluded that by middle school, the students enrolled performed at or above their peers not enrolled in dual language (DL). Other current studies noted in support of DL programs showed positive effects for ELL reading proficiency, although the practice of DL has not always been lauded for its effectiveness (Alanís & Rodriguez, 2008; Cheung & Slavin, 2012; DeJesus, 2008; Fortune & Tedick, 2015; Lindholm-Leary, 2012; Lindholm-Leary & Genesee, 2010; Slavin & Cheung, 2005; Slavin et al., 2011; Theoharis, 2007; Thomas & Collier, 2010). Research conducted during the earlier emergence of bilingual education with the enactment of the ESEA Title VII legislation discounted its effectiveness (Rossell et al., 2000).

Several studies on dual language teaching which showed limited success or no difference in outcomes for reading proficiency in ELLs advocated the best strategy to be ‘good instructional practices’ (August & Hakuta, 1997; García, 1991; Genesee, 1987), while others which supported DL have also generalized that ‘best practices’ were as important for ELL success in reading (Cheung & Slavin, 2012; Li & Edwards, 2010). It is critical to recognize, however, that the ways in which ‘best practices’ are delivered in dual language classrooms versus traditional classrooms can differ greatly. Reports denouncing the effectiveness of dual language practices began to surface in the mid-1980s and voiced popular reaction to the creation of programs in which instruction within DL programs was delivered in segregated methods to appease the demands of the legislation (Meyer & Feinberg, 1992). Programs in place across the United States during the 1980s and into the 1990s did not include TWI, and many practices being employed were isolating non-English

speaking students from the general school population (Slavin & Cheung, 2005). A common goal of early versions of DL, such as transitional and one-way immersion programs, was to replace students' primary language with English (Calderón, Hertz-Lazarowitz, & Slavin, 1998; Thomas & Collier, 1997). O'Day (2009) discounts this conclusion as a reaction to the English-only movement, and further delineates why ELLs need a balanced literacy approach rather than the same instruction that English-speakers are given. Other criticisms of DL education popularized the notions that ELLs were performing poorly, isolated in Spanish-only classrooms, and failing to acquire English skills necessary for success in U.S. schools. This reinforced public misconceptions and stereotypes placed on DL and led to the passage of English-only initiatives in California, Arizona, and Massachusetts requiring ELLs to be placed in English immersion classrooms (Crawford & Krashen, 2007).

Current research on DL programs and initiatives has begun to focus on programs, such as TWI, which intend to develop biliteracy in students from both English and non-English backgrounds and preserve the language and culture of ELLs. Instructional models being used in TWI programs across the country showing the highest degrees of success for ELLs are based upon extensive research on common best practices and noted by experts in the field of dual language education. Three models of TWI commonly employed for English language learners include: the 90-10 model, or "gradual immersion," emphasizing 90% instruction in the primary language in kindergarten through second grade and gradually increases English immersion in third grade. This model has shown success and has been identified as an effective method in meeting the needs of ELLs and promoting high achievement in reading (Alanis & Rodriguez, 2008; Genesee, 1987; Lindholm-Leary, 2005; Thomas & Collier, 2012); the 50-50 model, or "constant immersion," employs instruction for

half of the academic school day in the primary language and the other half in English from kindergarten through fifth grade and has also proven to be an effective implementation method (Francis et al., 2006; Gersten, Baker, et al., 2007; Thomas & Collier, 2012); the 80:20 model, also referred to as “gradual release,” blends the two concepts and begins with 80% instruction in the primary language and gradually increases English instruction until reaching a 50:50 model by third grade (Gonzales, 2008; Thomas & Collier, 2012). Studies done over the past 15 years comparing TWI programs to all other methods of teaching ELLs conclude that the majority of other programs have, at the very best, the same results as TWI programs (Cheung & Slavin, 2012). While the debate continues regarding how to best meet the needs of ELLs, some states with previously established English-only legislation are restructuring programs due to increased evidence of the effectiveness of TWI methods (Castro, García, & Markos, 2013).

Defining the most effective instructional strategies being used in DL has become a focus of current research. Several strategies were noted to have consistently strong, positive correlations with success in DL programs. While many practices and strategies have been identified by research as having positive outcomes for ELLs, the five strategies which are categorized below have been more highly documented by leading experts and identified as most effective in producing reading success in DL programs (see Table 2.4). The use of these strategies across many TWI program models vary in application and label, so have been grouped by common traits: (a) small group guided reading instruction, which targets individual literacy needs, allows for support in the target language, and is noted for its high rates of success in reading improvements for ELLs; (b) dual literacy practices embracing the use of teaching literacy in both languages simultaneously, and has been found to be highly

applicable in both the 90-10 and 50-50 models with strong support for its use; (c) content-based instruction methods creating meaningful connections to what is being learned and the structure of the language being taught and is a common component in most immersion programs associated with successful student outcomes; (d) vocabulary development, which strengthens students' ability to comprehend what they read and produces high enrichment when oral language is an included component; and (e) heterogeneous collaboration supporting active cooperation and genuine interaction of student participants, while fostering mastery of the opposite language while exploring, creating, and solving problems as a team.

Table 2.4

Research-based Instructional Reading Strategies Used in DL Programs

Strategy		Supported Research
90-10 & 50-50 Models	small group guided reading	August and Shanahan (2006); Echevarria, Vogt, and Short (2008); Gersten, Baker, et al. (2007); Gregory and Burkman (2012); McIntyre (2010); Saenz et al. (2005)
	dual literacy practices	August and Shanahan (2006); Chen and Yildiz (2010); Krashen and McField (2005); Lindholm-Leary and Block (2010); Rolstad et al. (2005); Slavin and Cheung (2005); Stone, Silliman, Wallach, and Ehren (2016); Thomas and Collier (2002, 2012)
	content- based instruction	Alanís and Rodriguez (2008); August and Shanahan (2006); Barr, Eslami, and Joshi (2011); García et al. (2008); Genesee and Lindholm-Leary (2013); Genesee (2006); Gersten, Baker, et al. (2007); Meltzer and Hamann (2005); Reyes and Kleyn (2010)
	vocabulary development	Barr et al. (2011); Cárdenas-Hagan, Carlos, and Pollard-Durodola (2007); Dressler and Kamil (2006); Echevarria et al. (2008); Goldenberg (2010); Hickman and García (2014); Lesaux and Geva (2006); Lindholm-Leary, 2008; Lindholm-Leary and Block (2010); Markham and Gordon (2008); Niu and Andrews (2012); Wallace (2007); Wong-Fillmore and Snow (2000)
	heterogeneous collaboration	Alanís and Rodriguez (2008); August and Shanahan (2006); Barr et al. (2011); Calderón et al. (1998); Cheung and Slavin (2012); Francis et al. (2006); Gersten, Baker, et al. (2007); Murphy (2010); Nieto (2004); Soltero-González, Klinger, and Cano-Rodríguez (2013); Theoharis (2009); Urciuoli (2013)

As proponents for vocabulary development, Wong-Fillmore and Snow (2000) point out that ELLs often come with text structures that are culturally rooted and differ from those found within the school's text culture. Therefore, mastery of academic English vocabulary is crucial for student to understand textbooks, solve math problems, and take tests. Further evidence for promoting TWI program success is noted in the development of strong teacher professional development practices. Theoharis (2009) identifies ongoing and intensive staff development as a key component in changing the way schools teach and incorporate equitable practices for marginalized students. Effective professional development strategies found to improve the teaching of ELLs include coaching; book studies; peer modeling; problem-solving; experiential opportunities to engage teachers in actual teaching, assessment, observation, and connection to the teachers' classes, students, and subjects taught (Darling-Hammond, 1998; Francis et al., 2006; Lindholm-Leary & Block, 2010).

Another area for building competence in educating ELLs is to focus on teachers' knowledge about language learning and how language relates to teaching and learning. Building teacher capacity for educating ELLs includes learning about oral and written language development and about the specific nature of academic English (Wong-Fillmore & Snow, 2000). Lindholm-Leary (2012) advocates providing "professional development around the dual language education model and second language learning strategies as a component of effective programs for teaching ELLs" (p. 261), and Theoharis (2009) is a strong proponent of professional development which focuses specifically on the DL model. To make strides with non-English speaking students, it is a demographic imperative to enhance teacher development in light of trends in increased ELLs across U.S. schools (García &

Jensen, 2009). The use of teacher professional development and the five most highly noted strategies for improving academic success ELLs were examined in this study.

Measuring the Academic Success of ELLs

National achievement data suggest that students not proficient in English lag far behind their English-speaking peers; nationwide, only 12% of students with limited English scored “at or above proficient” in mathematics in the fourth grade on the *National Assessment of Educational Progress* (2012), compared with 42% of students not classified as ELLs. The gap was considerably wider in eighth-grade math, with only 5% of ELLs proficient or above grade level, compared to 35% of non-ELL students. Programs and methods continue to be developed to address the academic achievement deficit represented by ELLs in schools across the country, yet the many unique language barriers represented across the country continues to pose a great challenge in developing adequate assessments for English learners (Center for Public Education, 2015; Escamilla, 2006). A lack of success in standardized programs used in the United States to instruct ELLs is problematic for our institutions of public education (National Clearinghouse for English Language Acquisition, 2011). Instructional methods and models have evolved over the years targeting our immigrant populations, yet the problem persists: educational programs designed for ELLs have not produced high scores on standardized tests in elementary and secondary education (Cech, 2009).

Such disparity heightens the need for teachers worldwide to be responsive to bridging the educational divide that separates native and non-native speakers’ academic achievement (Liggett, 2013). Decades of studies and attempts to resolve this national crisis have been presented as evidence that shows the need for further development of assessment criteria to

adequately measure academic ability in ELLs. According to Escamilla (2006), “. . . language tests in the form of high-stakes tests are potentially lethal weapons if they are given in English only to children who are learning English as a second language” (p. 196). Escamilla argues that such tests legitimize the ‘gap’ in student achievement and that the results of high-stakes tests in Spanish are ignored, so developing adequate assessments for ELLs is an urgent and critical step to the success of education in the United States.

The National Center for Education Statistics (2015), reported that the achievement gap has remained constant between English and non-English speaking students regardless of program initiatives to educate ELLs. Reading proficiency gaps between English native speakers and ELLs have been constant for many years, and while ELL scores have increased slightly, they are mirrored by growth in non-ELLs in the United States. The outcome of programs being used to address the gap in reading proficiency for non-English speaking students in schools across the country has not shown an adequate means to promote the success needed for ELLs in school. Equally notable was the trend in low performance on standardized tests for reading proficiency in elementary, middle, and high schools across the country (Goldenberg, 2010). The National Center for Educational Statistics (2012) reported that the reading scale scores of fourth-grade ELLs had gone from 183 to 188 in the 10 years between 2002 and 2011, while the scores of non-ELLs in the same grade rose from 221 to 225; eighth-grade scores for ELLs are well below that of their non-ELL peers, maintaining at least a 35-point achievement gap in reading since 2002 (see Figure 2.6). A multitude of programs and initiatives intended to address barriers to learning for ELLs has not affected these scores, which fell well below the national standards for competence in reading.

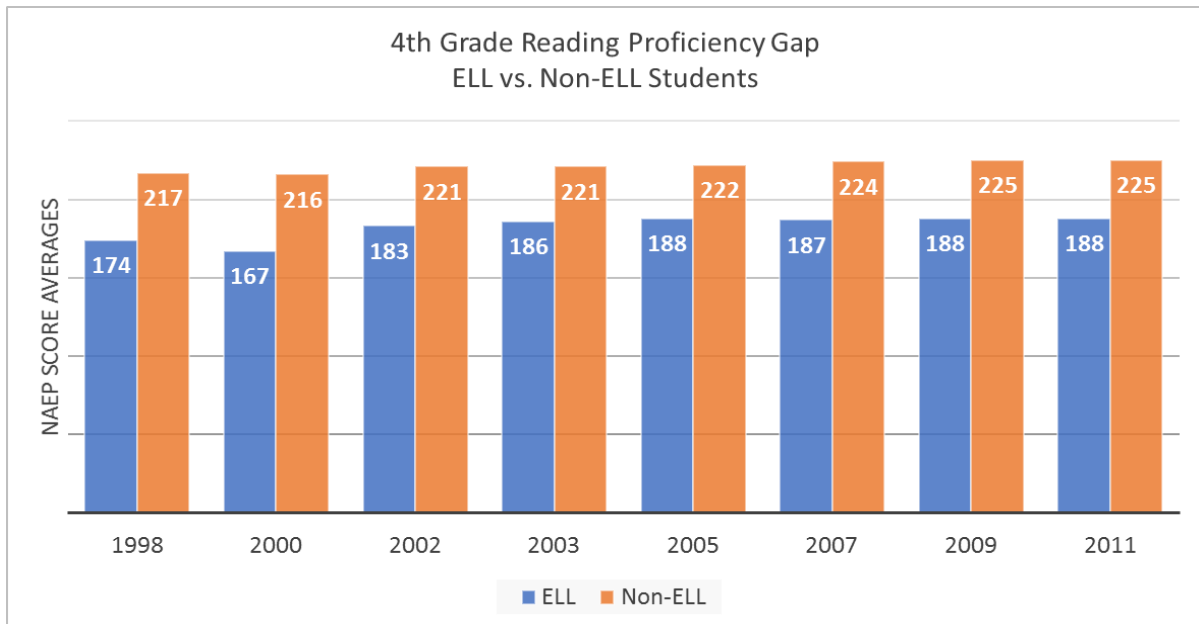


Figure 2.6. NAEP fourth-grade reading gaps ELL vs. non-ELL. Source: NCES (2012).

Further evidence exists to show that the average levels of achievement reached by students in reading are well below standards. National proficiency scores in reading for fourth-grade ELLs have fallen well below both ‘Proficient’ and ‘Basic Skills’ levels since 1998 (see Figure 2.7). Basic reading skills, according to the National Assessment of Educational Progress (2015), denote the ability for students to be able to locate relevant information, make simple inferences, use their understanding of the text to identify details that support a given interpretation or conclusion, and interpret the meaning of a word as it is used in the text. Currently a score of 208 on the standardized reading assessments for fourth grade constitutes ‘Basic Skills.’ For a fourth-grade student to be deemed ‘Proficient,’ a score of 238 is the current standard in schools across the country. This denotes the added ability of students to further use their skills to integrate and interpret texts and apply their understanding of the text to draw conclusions and make evaluations. Without basic skills in reading, ELLs are highly unlikely to achieve the growth needed to close the gaps in proficiency with their English-speaking peers (Cech, 2009).

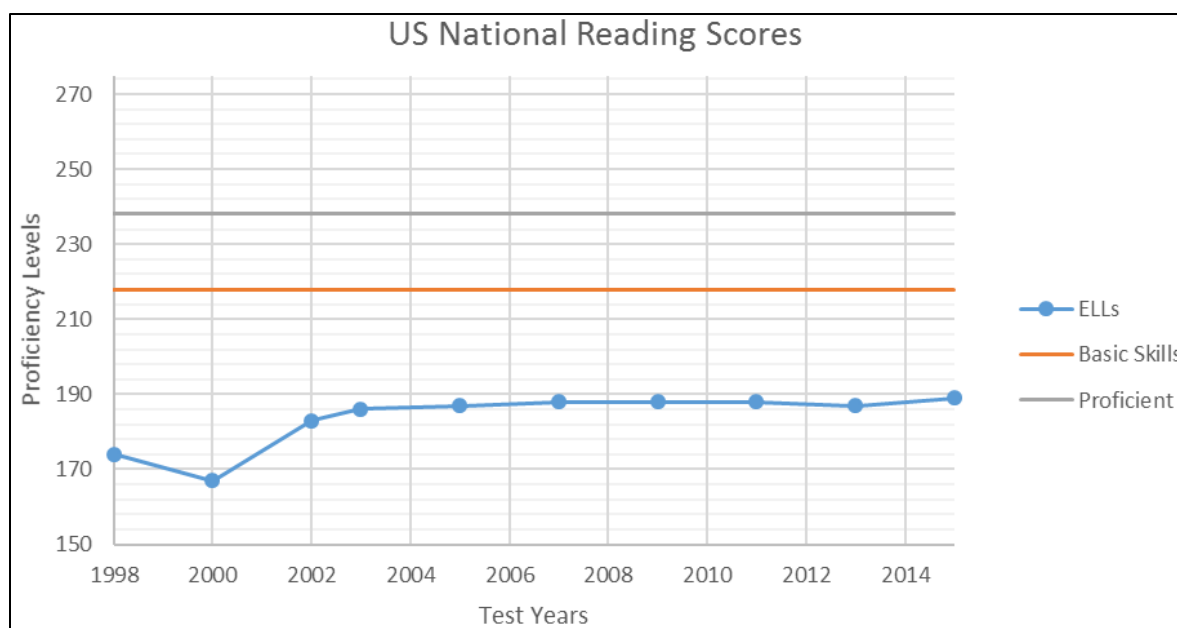


Figure 2.7. U.S. fourth-grade ELL reading proficiency 1998-2015. Source: NCES (2015).

Academic achievement gaps exist for many reasons across the spectrum of public schools in the United States. These factors may include low socioeconomic status; English language proficiency; learning disabilities; abuse or neglect; homelessness; low parent education levels; mother's marital status at the time of birth; parent English language proficiency; and many more (Barr et al., 2011; Capps et al., 2005; Kozol, 2012; Passell, 2008). It is likely that students whose primary language is not English have multiple factors putting them at risk for attaining core academic skills necessary to be successful school (Center for Public Education, 2015). The more risk factors a child is subjected to, the lower the probability they will do well in school in terms of learning and excelling in a standard educational environment. Rather than identifying one or two student background factors to account for low achievement in ELLs, educational risk can be generally attributed to a myriad of interrelated out-of-school factors. Because ELLs simultaneously exhibit multiple risk factors, they generally have higher potential for academic underachievement

(Hernandez, Denton & Macartney, 2008). According to Li and Edwards (2010), “Spanish speakers in the US tend to come from low educational and economic backgrounds . . . consequently, most ELLs are at risk for poor school outcomes because of not only language but also socioeconomic factors” (p. 84). As concluded by Sklra et al. (2004) in their review of educational equity, “Achievement gaps by race, ethnicity, home language or culture, SES, or other variables are not just an educational problem, but a problem for our entire society” (p. 156).

The learning gap between English and non-English speaking students persists. Typically, English speakers gain one academic year of growth during each school year, while English learners need to grow more than a year over several consecutive years to close this gap (Thomas & Collier, 2002; Viadero, 2009). According to Solórzano (2008), English speakers outperform English learners on all measures of standardized testing. The potential for these assessment measures to adequately measure the growth of ELLs remains a problem, thus furthering the divide between instruction and assessment. Both predictors and measures of student academic success cannot be tied solely to these standard formats unless tests are offered in the primary language of the learner. The limits presented in annual reports of student achievement required by state and federal levels are inherent in the way in which they collect a mere snapshot of student potential and growth (Thomas & Collier, 2002). Concurrent with this reasoning, researchers agree that studies which evaluate programs for language learners often do not focus on the long-term success of ELL students (Kopriva, 2008; National Research Council, 2011; Pienemann, 1987; Viadero, 2009). The academic ability in ELLs as measured using standardized assessments must consider that English tests cannot capture the actual aptitude of a non-English proficient test-taker. Rarely are students

tested in their native language; therefore, it is difficult to capture their knowledge (Kopriva, 2008). Despite their shortcomings, English assessments remain the primary means by which ELLs across the country are measured for academic proficiency (Migration Policy Institute, 2016).

The number of ELLs attending our public schools in the United States continues to grow. Increasing the reading achievement of ELLs to close the achievement gap is an extremely difficult task (Francis et al., 2006). With ELL reading scores under 190 for over 20 years, and no significant improvement in reading proficiency levels since 2002, teachers everywhere increasingly face the challenge of meeting the academic needs of their non-English speaking students (Slavin, 2010). Leading scholars in language acquisition research report that schools are struggling to find ways that best meet the needs of students who come to school with little or no skills in English literacy (August & Shanahan, 2006; Cheung & Slavin, 2012; Lindholm-Leary, 2012; Solórzano, 2008; Thomas & Collier, 2012).

Highlighting the struggle teachers have in reaching students with language and cultural barriers, these studies provide evidence to affirm that the practice of teaching ELLs is plagued with strife. Educators grapple with the concepts of introducing grade-level appropriate content when language acquisition skills transfer to these students with low levels of comprehension and application of the learning targets (Li & Edwards, 2010). Likewise, inadequate means to assess the capability of students whose native language is not English and their lack of understanding the dominant culture are noted as causal sources of this issue (Kopriva, 2008).

As general assessments are developed, it is important that ELLs be taken into consideration. A team of educators was tasked by the federal government to develop a new

assessment designed specifically for ELLs. According to an article in *Education Week*, Zubrzycki (2011) described a new assessment being developed by The Wisconsin Department of Public Instruction, stating that a \$10.5 million, 4-year grant was awarded to Wisconsin by the U.S. Department of Education to create an online English-language proficiency assessment. The goal of this new test was to tie standardized measures of student success to the Common Core curriculum through a consortium including multistate involvement. The outcome hoped to lead to increased standardization in how ELLs are taught in the United States. The primary aim for Wisconsin was to help students to be college and career ready. Assessment and accountability for English learners also emerged as the top two issues discussed at the final sessions of fiscal year 2011 in the U.S. Department of Education Office of English Language Acquisition (OELA, 2015). The lack of reliable and valid assessments for testing ELLs in their native language was cited as a prominent problem. Also, a lack of disaggregated data on schools' success in exiting former limited-English proficient (LEP) students from ELL programs was the main concern on the accountability issue (Barrera, 2011). According to the latest American Community Survey (Migration Policy Institute, 2015), assessment and accountability issues for ELLs are increasingly high on the priority list for both private and public parties across the country.

Prominent bilingual education and assessment researcher Escamilla (2006) noted some significant issues regarding the way assessments are used in the United States. Since the inception of the standards-based education movement, several problems in teaching and measuring the proficiency levels of English learners have been identified:

- ELLs are often placed in short-term educational programs that lack adequate materials and staff, limiting their opportunities to learn;

- Standardized tests employed by most states were developed to test native English speakers, not ELLs;
- Paper/pencil content area assessments in English often measure ELLs' lack of proficiency in English rather than their content knowledge; and
- Many state assessments are available in English only, which fails to provide the opportunity for students to demonstrate proficiency in a non-English language.

At least 20 states have developed testing policies to negate some of this effect, including exempting ELLs from testing in English for up to three years, the use of test accommodations, and offering assessments in other native languages. Most states use some exemptions and accommodations, although few provide high-stakes assessments in the students' native language (Rivera & Stansfield, 2004). In a study conducted in Colorado by Escamilla (2006), evidence showed that students tested in their native language outperformed English-speaking students testing in English as well as the average scores of English-speaking students district-wide. This illuminates how viewing the issue under the 'language as a problem paradigm' highlights the need to consider the evidence to the contrary. The North Carolina Department of Public Instruction (2016) allowed ELLs new to the state, who demonstrate limited English proficiency, one academic year of exemption from testing in reading. However, with the passage of the *Every Student Succeeds Act* (ESSA), beginning with the 2017-18 school year, states are now required to develop a plan for the inclusion of recently arrived ELLs in the state accountability model (North Carolina Department of Public Instruction, 2017). Their language ability is measured through use of a test developed by WIDA called the ACCESS 2.0 placement test. Accommodations such as read-aloud, separate setting, extended time, and the use of an English-Spanish dictionary are offered to students

for any subsequent years they are still classified as LEPs. North Carolina does not currently endorse the development of any state tests in a language other than English.

Academic Assessment of ELLs and North Carolina

When considering the assessment of ELLs in the United States, immigrants who come here with little or no knowledge of the English language are typically forced to show their academic acuity by scoring standards set forth in standardized tests. According to Kopriva (2008), an important factor to consider when gathering this data on ELLs is that the academic experiences they have had are best measured by tests in the language in which these experiences occurred to accurately measure their learning. To effectively assess an ELL's knowledge, testing should be done in the original language in which the learning experience was encoded. To determine which language in which the testing should be completed, it is important to find out where on the language acquisition spectrum the individual students are operating. Kozol (2012) points out that newcomers to the country at the age of six years old may receive instruction in English for several years but not be able to encode the information due to the language barrier. They also may have not received academic instruction in their primary language, so language transfer skills are less likely. Middle and high school students new to the country have likely received academic content in their native language, and thus their content knowledge would be better measured by being tested in their native language.

One of the most powerful tools used to examine the success of ELLs is the academic testing used to determine promotion from one grade to the next. All states across the country can develop their own testing format based on their student population. While this may be good practice, it does create inequity in data when comparing one state's tests to another

state's tests whose assessment methods may not be aligned (Ravitch, 2011). Over the past few years, many states have adopted a standard for assessments called "The Common Core," which was intended to better align public education's standards for assessment across the country (Kopriva, 2008). There are still many differences in assessment and scoring, however, so North Carolina standardized test data was used to analyze scores of ELLs in this study.

Data from the NCES (2009) show that the average reading scale score of fourth-grade ELLs across the country in 2009 was 189 compared to the average scale score of 221 for English-speaking peers. In this subgroup, only 32% performed at a basic level competency and 11% were proficient, leaving 56% two grades below grade level. In contrast, 67% of their English-speaking peers performed at basic level competency and 33% were proficient. By eighth grade the numbers of successful students in either basic level or proficiency totaled 40% of the ELL population with 60% performing two grades or more below the standard. The English-speaking peer group performance remained consistent from fourth grade to eighth grade. In a review of the reading scale scores from the National Assessment on Educational Progress (2012), ELL scores are much lower in both fourth grade and eighth grade in comparison with non-ELLs. The national average scale score for fourth grade ELLs was 188 in 2012 compared to non-ELLs at 223; in eighth grade that same year, the achievement gap remained with ELL scale scores at 219 and non-ELLs at 265. This persistent trend of low-performing ELLs across the country is mirrored in North Carolina.

Current academic assessment practices in North Carolina include "End-of-Grade" tests for grades 3-8, and "End-of-Course" tests for basic math, reading, and science for high-school students. All assessments are administered in English, and these scores are reported to the State Department of Public Instruction to measure school and district success based upon

the proficiency of their student body. Over the past ten years, North Carolina's testing scores fail to show significant growth in the performance of ELLs classified as limited English proficient students (LEPs). In 2013, scores from third grade through high school were generated in a report showing a vast difference between LEPs and English-speaking students. While non-Hispanic students showed 53% proficiency in math, LEPs showed an average of only 14% passing the End-of-Grade and End-of-Course tests in math. Science testing revealed similar averages scores, with a mere 13.3% of LEPs having passing scores while 64% of non-Hispanic students passed the same tests across all tested grades (Public Schools of North Carolina, 2013). Scores of the reading assessments given in grades 3-8 and high school showed the greatest gaps (see Figure 2.8).

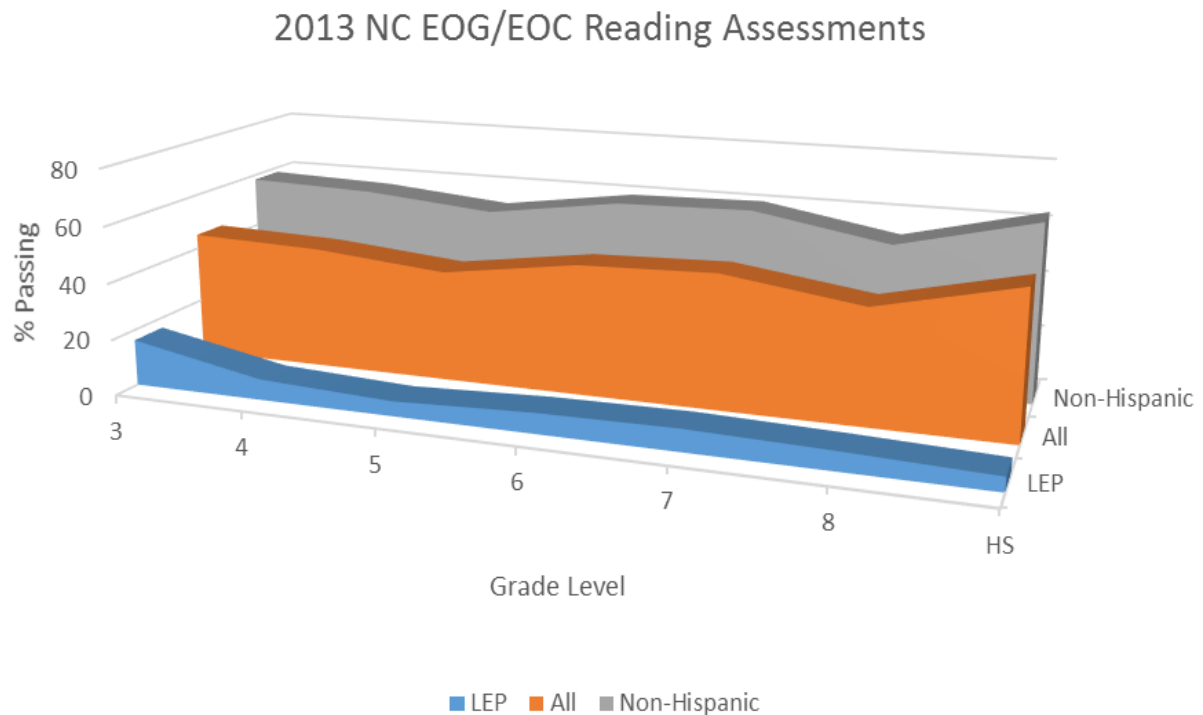


Figure 2.8. NC End-of-Grade and End-of-Course assessments, 2013. Source: NC Report Card (2013).

Assessing LEP performance in high school via the End-of-Course English II test, only 7.4% of LEPs passed the test in comparison to an overall proficiency of 59.6% and 71% of White students scoring at or above grade level. This trend has been noted for years, and North Carolina's public-school administrators are taking notice. Different programs and methods have been explored over the past ten years to address this issue (Collier & Thomas, 2014), yet testing continues to show a lack of success in improving educational outcomes for the majority of LEP learners.

Recent comparative scores of the 2014-2015 school year from the NC School Report Card (2015) show similar trends in achievement for LEP students in North Carolina public schools. In third through eighth grades, the percentages of LEPs who were proficient in reading as compared to their White peers and overall performance across the grade is alarming (see Figure 2.9). Overall proficiency by subgroups shows 56.3% of the state's entire student population taking End-of-Grade tests for all subjects performed at grade-level proficiency, while 23% of LEPs were proficient compared to 68% of White students performing at or above grade level. A review of math and reading scores showed the gap increasing and shows a similar decline for LEP student success as they progressed in grade level. Overall math proficiency for the state showed 44.1% of the population, with 69.4% of White students performing at or above grade level and only 18% of LEPs receiving proficient scores. Reading scores showed similar trends, yet a greater achievement gap between White and LEP students exists. What was evidenced by these data is that North Carolina has yet to establish a means to provide an adequate education to its English-language learner population in public schools.

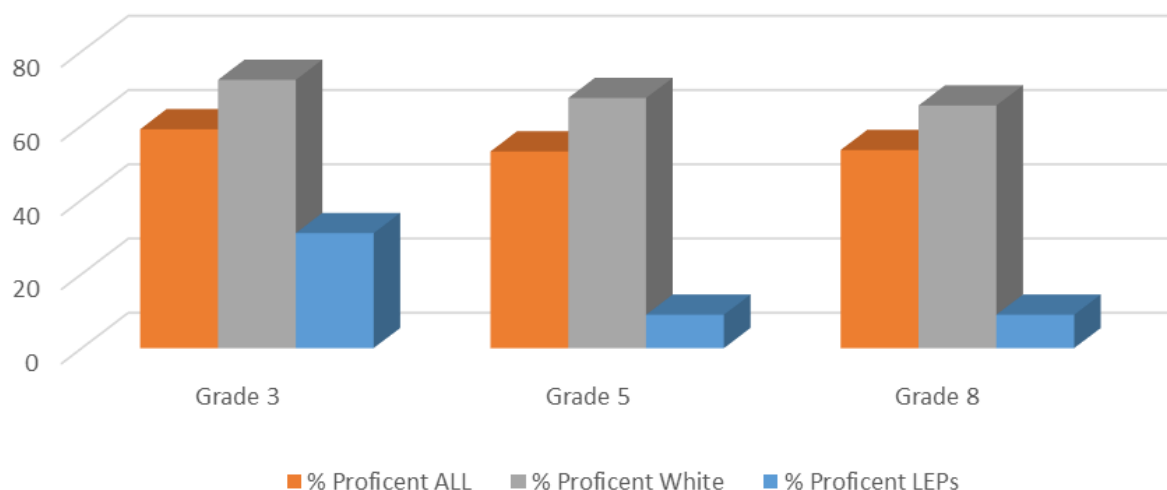


Figure 2.9. NC End-of-Grade reading assessment proficiency, 2015. Source: NC Report Card (2015).

Dual language researchers Thomas and Collier (2010), who have been leading the development of dual language instructional programs over the past decades, conducted a primary research study of North Carolina public schools. They found strong empirical evidence and resounding agreement on the virtues of teaching English learners through two-way immersion (TWI) methods currently being employed. Differences in effectiveness, longevity, and types of programs abounded, as did the demographic differences of the populations present in each area of the state. What was shown in the data to support the statistical significance of their findings was clear: every school in North Carolina employing a TWI approach to teaching ELLs produced DL students with higher reading and math scores than the non-DL students in grades 4 through 8. They concluded that “all examined student groups benefitted from attending dual language classes . . . in favor of dual language classes for all [students]” (p. 43). These results became the final filter of schools which were included in this study. In the Collier & Thomas publication, *Creating Dual Language Schools for a Transformed World: Administrators Speak* (2014), principals working in DL

schools across the country spoke out in agreement of the virtues and vast benefits for students: high-quality, well-implemented dual language programs offering a wealth of enrichment opportunities to its students and the community; world and cultural knowledge; bilingualism and strong communication skills; creativity and innovation; and the ability to rapidly process information. Leaders must build strong advocacy for their DL programs to accomplish all that is possible within the dual language environment.

A Sociocultural Perspective on Equitable Education

The use of any approach to providing equitable access to education for ELLs should also consider cultural differences in processing information. According to Rong and Preissle (2009), components regarding the education of immigrant populations must also include concepts of social identity and the ability of English learners to become confident in their learning environment to become successful. They recommend that a command of both languages should be developed for immigrants to survive in U.S. society. Some characteristics of these learners include such tendencies as linguistic borrowing or code-switching by which ELLs interchange conversation from one language to the other. “Survival English” is also common among these learners because they have no access to English-speaking adults or networks; therefore, they use the target language only when necessary (Carlo et al., 2004). When the comfort level is limited, both children and adults are inhibited, restricting their access to public resources and cultural capital. Young immigrants are at much greater risk, standing to develop both a generational and cultural gap with their assimilation into American life (Capps et al., 2005; Hernandez, Denton & Macartney, 2008). Encouragement from the bilingual environment through the development of the Spanish language at school is important. Recommendations include forming social connections to

increase communal social capital with families, maintaining strong links within the closed social network of Spanish speakers, helping ELLs to stay tied to their migrant community, and expanding local language programs in both Spanish and English (Crim-Feinberg, 2007; Liggett, 2013; Rong & Preissle, 2009). Embracing the socially just practices represented by LatCrit theory could potentially provide all of these benefits for Spanish-speaking students.

Dismantling attempts have been made to address cultural racism in the media (Dixson & Rousseau, 2005; Kozol, 2012; Lippi-Green, 1997; Urciuoli, 2013). Blatantly splashed headlines continue to draw attention to racial disparities regarding school accountability in testing (Liggett, 2013; Lindholm-Leary, 2012; Ravitch, 2011). Dixson and Rousseau (2005) posit that “if we focus only on the scale of inequality and school-level approaches to address it, we lose sight of the most powerful forces operating at the societal level to sustain and extend those inequities” (p. 249). In North Carolina and across the country, there is evidence of great disparity in the ways in which students whose race presents a primary language other than English are taught in our schools (August & Shanahan, 2006; Barrera, 2011; Carlo et al., 2004; Center for Public Education, 2015; Crawford, 2004; Darling-Hammond, 1998; de Jong, 2010; Downey, 2008; McIntyre, 2010; NCELA, 2011; Rolstad et al., 2005; Thomas & Collier, 2012). What happens in the larger communities that encompass our schools must be considered as an influencing factor regarding how races fare one against the other (de Jong, 2010). An example of how inequities are presented with a racial divide has been closely associate with the achievement gap. Students from non-English speaking races in this country must be able to withstand the powerful influences of the English-speaking culture in the United States (Muschkin & Beck, 2007). To develop their racial and cultural identity, immigrants struggle through a series of stages in their attempts to assimilate into the greater,

more acceptable societal culture (Nieto, 2004). Debilitating factors that are present for ethnic groups in the United States engage these individuals in a battle of resistance to being immersed within, and held to the expectations of, the majority race (Atkinson, Morten, & Sue, 1998). Schools, administrators, and teachers can serve to bridge this cultural divide for language minority students by embracing socially just practices and learning about LatCri theory issues faced by their Hispanic students.

The impact that teachers can have upon the success students experience in acquiring structural knowledge of the English language to promote success in school is powerful, and it is obvious that race and language play key roles in the outcomes (Rong & Preissle, 2009). Experts advise that school personnel should be mindful of the affect in the classroom where culture and race need to be more visible (Cech, 2009; Jenlink, 2009; Liggett, 2013; Ochoa, 2016). According to Ryan and Dixson (2006), becoming more comfortable with not knowing everything, and thinking about what students need to do, think, feel, or believe to have a voice will allow educators to position themselves as co-learners rather than as experts. “Being more explicit in our teaching about how all knowledge is partial and how all practices are bound up in structural systems in this country are critical components for teachers to become more successful at teaching diverse populations” (p. 179). For educators, being fluently bilingual is a highly sought-after skill that can give professionals in the field of education an advantage in developing the academic proficiency of ELLs (Center for Public Education, 2011). How ELLs experience learning in American schools can become part of the problem instead of the solution to increasing student academic success and closing the gap between them and their English-speaking peers (Ochoa, 2016).

In order to address the academic gap that persists for ELLs in North Carolina, there are several important considerations for influencing a pedagogical shift in teaching ELLs in public schools. Regarding the way the public views our national responsibility to educate immigrant students, the reactions vary greatly by district, state, and region (Aguirre, 2005; Capps et al., 2005; de Jong, 2010; García et al., 2006; Goldenberg, 2010; Lucas et al., 2010; Parrish et al., 2006; Wright, 2005a). Taxpayers have a say in what programs are chosen, and depending on the culture in certain districts, spending tax dollars to educate immigrant populations to learn our adopted national language can become a point of deliberation. According to leading expert on equity in education, Darling-Hammond (2012), “States have an important role to play beyond guiding the flow of taxpayer money to schools—one that is vital in creating productive conditions for education” (p. 162). She emphasizes that both Connecticut and North Carolina, who have large numbers of low-income and minority students, have provided insights on how states can increase educational quality and reduce inequalities when governments assume this role. The statistical data denoting the failure to adequately provide academic success for ELLs across the county highlights the ineffectiveness of current teaching pedagogy. This gives cause for further studies to explore alternative methods of instructional programs that will promote academic achievement for our ever-growing immigrant populations (Parrish, 2006).

Several states have been dealing with the language barrier issues for decades and have tried extreme measures to promote the development of English language skills in ELLs. California, with its high percentage of the immigrant population, has gone through numerous shifts in the educational landscape in efforts to address the issues. The passage of its Proposition 63 in 1986 amended the state constitution to declare English the state’s official

language and required the legislature and state officials to preserve and enhance English as the common language of the state. Public debate over this law brought issues and attitudes regarding the use of language in schools into focus (MacKaye, 1990). More recent legislation regarding how to best serve the needs of ELLs has surfaced with California's induction of Proposition 227 in 2000. The legislation required ELLs to be taught overwhelmingly in English through *sheltered/structured English immersion* (SEI) programs. Findings showed that following the passage of Proposition 227, the proportion of ELLs receiving primary language instruction with English language development (bilingual instruction) dropped significantly, from 30% to 8%, and the proportion receiving specially designed academic instruction in English increased (Parrish, 2006). Further findings suggested considerable variations in program delivery across California and identified a number of barriers to program implementation. Student achievement has shown that the performance gap between ELLs and native English speakers has remained virtually constant in most subject areas in most grades (American Institutes for Research, 2006).

Similarly, at the turn of the century Arizona enacted Proposition 203 outlining requirements for schools to adopt "English-only" instructional models (Johnson, 2005). Public debate and an outcry of injustice marked this legislation as the struggled to find ways to better educate their growing population of English learners continued (Wright, 2005a). Evidence suggests that Proposition 203 and its implementation were a political spectacle rather than a democratic rationale for policymaking with a true concern for ELL students (August et al., 2009). Components of the political spectacle framework are evident in this initiative and its implementation, highlighting the use of strategies to promote the methodologies for public appeal rather than educational success (Wright, 2005b). A

metaphor analysis grounded in critical discourse was applied to defame bilingual education and those who supported it in Arizona, as well as the underlying ideology behind legislation like Proposition 203 (Wiley & Wright, 2004). In general, the overall debate between bilingual education and Proposition 203 was characterized as a “war,” with results showing extra emphasis on portraying bilingual education as a failure and situating minority-language students as the victims of a poorly constructed educational program (Johnson, 2005). According to Mahoney (2008) in her excerpt in the *Encyclopedia of Bilingual Education* entitled *Impact of Proposition 203 (Arizona)*,

The underlying assumption of Proposition 203 raises concerns similar to that of *Lau v. Nichols*, the 1974 US Supreme Court case that found that ‘students who do not know English are effectively foreclosed from any meaningful education’ because they cannot understand English. (p. 4)

While proponents of this English-only initiative would have ensured ELLs would soar academically and learn English in just one year, data suggests otherwise. Analyses of language proficiency tests and percentile scores from 2004 showed that ELLs did not learn English at a faster rate; they remained below 35th percentile and continued to decline from 2003-2004. While the majority of English-proficient students passed all sections of the Arizona Instrument to Measure Standards (AIMS), 68% of ELLs failed the AIMS math and 67% of ELLs failed the AIMS English tests (Gonzales, 2008).

Refusal to teach in a language other than English may be counter-intuitive to the research, which supports the use of instruction in the native language first and has been shown to promote learner success in acquiring English proficiency. Thus, the English-only initiatives have become scrutinized as politically motivated (August et al., 2009). Much political influence has driven national attention of the issues concerning ELLs in our schools. At its inception, the No Child Left Behind (NCLB) legislation acknowledged ‘a growing

achievement gap between the races’ which had been left unaddressed for far too long (Gonzalez, 2008). Policy actors have spent years defending their position on exactly what ‘equal access to education’ really means, yet U.S. public schools still have not found adequate means to close the achievement gap (August & Shanahan, 2006).

NCLB legislation clearly delineates the legal expectations regarding the education of ELLs and immigrants under both Title I and Title III. Also noted in the English Language Acquisition, Language Enhancement, and Academic Achievement Act, are the purposes to ‘ . . . help ensure that children who are limited English proficient . . . attain English proficiency, develop high levels of academic attainment in English, and meet the same challenging State academic content and student achievement standards as all children are expected to meet . . . ’ (National Center for English Language Acquisition, 2002). This legislation outlined state and local educational agency responsibilities to develop high quality language instructional programs which would enhance ELL capacity to perform in schools under Title III. More clearly defined under Title I are state requirements to assess ELLs and demonstrate, with accountability consequences, that they are becoming English proficient and achieving proficiency in the same core academic content as all other students. It delineates the right that all citizens of the United States have been guaranteed under the Constitution to an adequate and equitable education in our public schools (Baker et al., 2014; Capps et al., 2005; Gersten, Baker, et al., 2007; National Research Council, 2011). Since this legislation was signed into law in 2001, shifts in the way school districts choose to address this challenge are unique to the social, political, and demographic climates they represent (Capps et al., 2005).

Education policies, often centered on the political actors and the power arena, can exclude the children who will bear the brunt of the proposed policy (Marshall, 2002). In order to encompass the social, cultural, and political landscapes of our states, the educational community and all of its stakeholders must embrace the decision to implement programs targeting academic growth and success for ELL students (Collier & Thomas, 2014; Francis et al., 2006; García & Jensen, 2009; Lindholm-Leary, 2012; Ochoa, 2016). Social justice and LatCrit theory can be used to examine how this underrepresented population should be served by the promise they have been given by our federal government (Theoharis, 2009). If educational leaders heed the multi-faceted needs of adequately educating its diverse population it could promote a sociocultural perspective on an equitable education for all.

A Conceptual Framework for Dual Language

In social science research, it is imperative that a theoretical framework be established to give validity to an otherwise potentially obscure set of empirical data (Liggett, 2013). Inequality in schooling has been theorized for many years across the world. Researchers often attempt to help drive policy-making to improve equitable practices in education with the evidence they collect, but they often fall short when they fail to ground their work in theory (Lucas et al., 2010). Framing research on dual language within the context of standardized theories on education becomes important to its success. Dual language programs have evolved due to the many studies of discrimination, deficit thinking, and inequitable access to education for students who speak a language other than English (Lippi-Green, 1997). Components of many educational theories including critical race theory, post colonialism, vertical equity, and social justice have tenets which support dual language

programs, the legislation governing its practice, and practices honoring the cultural heritage of ELLs (Hornberger, 1990).

Rawls (1971) framed early understandings of social justice which are grounded in the spirit of equality: all people have rights, so justice requires equality of treatment and opportunity for all people, and every person must have a fair or equal chance. Freire (1970) applied this theory directly to educational systems and articulated that they produce and reproduce oppression. Educational leadership scholars Scheurich and Skrla (2003) outlined that this meant creating equitable schools in which “. . . virtually all students are learning at high academic levels and there are no persistent patterns of difference in academic success or treatment among students grouped by race, ethnicity, culture, neighborhood, income of parents, or home language” (p. 2). Social justice leaders who are committed to equity and justice are creating better educational services for marginalized students by eliminating pull-out and self-contained programs for diverse learners and have in their place advocated for additive practices and inclusive services which teach students in heterogeneous groups (Theoharis, 2009). For ELLs, this marginalization is found in English-speaking public schools across the United States, and the tenets of social justice become a critical lens by which to frame this study.

Parallels to the dilemmas faced by Black students have been made to those faced by English learners in public schools through applications of Critical Race Theory (Liggett, 2013; Shuck, 2006). The inherent “whiteness” of educational practices in the United States noted by Ladson-Billings and Tate (2006) highlighted the notion of intersections across race and property. This was shown by the division across White and Black students in schools, in programs, and in the difference shown in students’ rights to everything offered within the

institutionalized educational system. The right of ‘exclusion’ was held only by students who were White, thus shunning students of color (Theoharis, 2007). While most Spanish-speaking ELLs in the United States are also students of color, language of dominance is also noted as an exclusionary factor. The elimination of first language maintenance practiced by English-only programs and transitional bilingual programs resulted in Spanish speakers from Mexico experiencing high levels of discrimination in schools based on race, accent, and country of origin (Liggett, 2013; Valenzuela, 1999). According to Gándara and Aldana (2014), a primary challenge facing schools today is the increasing segregation of Latino students, who are now the most segregated group of students in the United States. “Despite the Supreme Court decision to address the plight of segregation of Latino students, desegregation and language programming to assist English learners has been viewed as contradictory and competing with each other” (p. 735).

Theories of equity and equal access to education for minority students pervade legislation put forth in the United States addressing the ongoing challenge of meeting the needs of culturally and linguistically diverse students (Capps et al., 2005; Jimenez-Castellanos & Topper, 2012; Lucas et al., 2010; Verstegen, 2015). In *Teaching in 2 Languages: A Guide for Bilingual Educators*, Reyes and Kleyn (2010) outline the concept of being attuned to issues of political justice since multicultural education has roots in the civil rights movement of the 1960s and the Bilingual Education Act of 1968. “So, it is not surprising that bilingual educators have been deeply involved in struggles for educational equity” (p. 143). Looking through a sociopolitical lens to inform the teaching of ELLs includes an analysis of systemic constructs that favor native English speakers (Darder, 2012). Language policies in many states require LEPs to take standardized tests in English before

they have developed proficiency, thereby testing their language ability rather than content knowledge and limiting their access to higher level courses (Crawford, 2007). The result of these practices in our public school systems across the nation is the emergence of social categories which frame hierarchies of race, class, and ethnicity (American Educational Research Association [AERA], 2004; Liggett, 2013). The socially just and equitable options for language minorities become thusly revoked, creating, once again, the notion of the American-English moral and cultural superiority (Lippi-Green, 1997). Until U.S. public schools recognize and denounce the institutionalized racism plaguing the non-English speaking communities across the continent, education will never be equal for all (Lucas et al., 2010; Ochoa, 2016; Theoharis, 2009).

LatCrit explicitly applies to the constructs represented in DL programs which embraces multiculturalism and honors both languages. Components recommended by Ammarota (2007) who led a successful social justice program in Arizona include:

- multicultural education in all classrooms
- provide students with studies of Spanish culture studies
- teachers should learn about the cultures of their students
- offer social justice classes in middle and high school
- promote social justice teacher education
- provide mandatory courses in high school on multicultural education in which they learn about cultural diversity, race relations, and race and gender oppression

Application of these tenets helped to focus this study and ground the review of the data herein with a specific focus on LatCrit theory regarding the effectiveness of teaching Spanish-speaking ELLs. Latinos across the country, as well as every student regardless of

primary language, could benefit greatly from an environment that supports all cultures (Ochoa, 2016). Equity in education is the foundation upon which all great changes to teaching and learning are anchored (Ammarota, 2007). Viewed from an epistemological vantage point, the dual immersion model is seen to promote the socially just goals of bilingualism, cross-cultural appreciation, and academic success for Latino students typically underserved in public schools (Scanlan & Palmer, 2009). Embedding the data collection and reporting in a deeper LatCrit theory-based social justice framework enhanced the results of this study and expanded its usefulness in public schools across the state by highlighting strategies that work for teaching all ELLs.

Conclusions

The overwhelming empirical data regarding the low achievement of ELLs in the United States, coupled with a lack of effective programs to meet their academic needs, highlight the persistence problem of adequately educating our ELL population. Further studies are needed to explore strategies and methods currently employed within instructional programs that successfully promote academic achievement for our growing immigrant populations. What needs to be uncovered is a more effective means to teach non-English speakers and close the achievement gap. Evidenced by this body of research is the great need for developing a comprehensive dual language immersion program for all schools to meet the needs of our growing body of ELLs. A shift in pedagogy to meet this need is possible by developing the practices found within this study from successful TWI programs, a focus upon additive language development strategies, and the inclusion of the tenets of social justice and LatCrit theory, and balancing equity issues across language and cultural barriers.

This national issue has few examples regarding how to manage the ever-changing cultural diversity in our population. Continuous shifts in the demographic composition of schools, districts, and states alter student needs within our public schools every year. Leaders in education have become cognizant of the long-term issues facing public education in the U.S. and have attempted to scaffold structures to support our growing immigrant population. A transformation of the way education is delivered in our public schools may be warranted, with a primary goal of developing pedagogy to provide equitable programs for all students regardless of language, race, color, or creed. Building strong advocates and networks to improve access to education for all ELLs will help to garner the necessary support for closing the achievement gap between English learners and English proficient groups of students and improving academic success for ELLs in our public schools.

Current issues facing public education in the United States regarding the academic success of ELLs are pervasive across the states. As our world becomes increasingly global, the concept of cultural and linguistic diversity is becoming a reality for many countries. Solutions to the educational dilemmas being faced due to this demographic shift will not come easily; a well-planned strategy for addressing issues locally may provide a starting point for developing sound educational systems to better educate learners of the English language while also successfully building their content knowledge. This data collection applied social justice and LatCrit constructs to carefully examine how this marginalized population was being served by the application of two-way immersion programs. How these methods support the promise given by our federal government to provide an equitable education to all students, and what educational leaders can do to enact the necessary changes to the way we teach were the ultimate goals uncovered by this study.

Chapter 3

METHODOLOGY

This chapter briefly restates the pertinent information regarding the purpose of the study, its conceptual framework and research questions, and the rationale for the chosen research design. It then outlines the research process which included site selection and participants; the two phases of data collection; and data analysis conducted independently and comparatively across the case studies. Finally, the significance of the study and the researcher's assumptions and limitations were identified.

Purpose of the Study

Currently, the number of students representing English language learners (ELLs) in United States schools is estimated to be over 5 million, and a distinct majority of them speak Spanish as their first language (Barrera, 2011; Batalova, 2010; Capps et al., 2005; NCES, 2009; U.S. Census Bureau, 2011). The achievement gap between English and Spanish speaking sub-groups continues to widen with ELLs across the grades performing lower than their peers in both reading and math (National Assessment of Educational Progress, 2010; U.S. Census Bureau, 2010; Whittenberg, 2010). This increased number of ELL students has had a profound influence on the expansion of programs targeting this population, placing increased pressure upon schools to maintain accountability standards, as outlined in the No Child Left Behind Act of 2001 (Capps et al., 2005). North Carolina's exponential growth of the Spanish-speaking population has resulted in over one-fourth of students in its public

schools being ELLs, and it is predicted that immigration trends will continue to increase the percentage of this population (Passell, 2008). There exists a high failure rate within this ELL student group that is limited-English proficient (LEP) in North Carolina, and it is coupled with the exponential growth of the Spanish-speaking population across the state (North Carolina Department of Public Instruction, 2014; Thomas & Collier, 2011). This makes it an ideal setting in which to conduct research regarding equitable access to education for ELLs.

In consideration of building a program to meet the many needs that Spanish-speaking students have in accessing their own academic potential, a variety of strategies have been developed. The most current research showed that ELLs with formal schooling in their first language acquire English faster than their ELL peers without first language literacy skills (Kopriva, 2008; NCELA, 2011; Slavin, 2010; Thomas & Collier, 2012). Using studies of current methods applied successfully in North Carolina schools for the ELL population (Thomas & Collier, 2011), this research identified the methods and practices that provide the greatest strengths within these programs. Programs being applied to target ELLs in North Carolina have had varying degrees of effectiveness, yet those employing dual language (DL) education models show the most promise in raising the achievement level of ELLs (August, 2006; Rolstad et al., 2005; Slavin, 2010; Theoharis, 2007; Thomas, 2006). The ultimate results from this study highlight the potential for large-scale DL immersion programs to be implemented at district and state levels through use of established practices and strategies.

While DL models vary, most NC districts with DL programs have implemented Two-Way Immersion (TWI) models for Spanish speakers. The TWI model includes content and language objectives delivered in both Spanish and English, and typically mixes native Spanish and English speakers equally in classrooms. Long-term achievement is greatly

enhanced when students receive instruction in their native language during their first years of assimilation into English-speaking schools (Slavin & Cheung, 2005; Solórzano, 2008; Thomas & Collier, 2012). The TWI models being used in K-8 schools across the country show vastly improved rates of student success on standardized tests, and there is strong evidence to show that this method offers greater ELL student growth in reading than other programs (Cech, 2009; Thomas & Collier, 2009; 2012). This conclusion was also supported by studies that compared bilingual education programs to English-only programs across the United States (Slavin, 2010). According to research, it is recommended that a command of both languages should be developed for migrants to survive in U.S. society (August & Shanahan, 2006; Chen & Yildiz, 2010; Thomas & Collier, 2012). After analyzing DL programs in North Carolina for three years, leading experts in the field of DL education, Thomas and Collier (2011), provided evidence that students in DL classrooms outperformed their peers on End-of-Grade reading assessments at every level from third through eighth grade. The potential use of this methodology may help to address the high failure rate of ELLs in North Carolina and offer a solution for increasing their academic success. This study illuminated instructional strategies being used in NC public schools currently implementing TWI programs which resulted in high academic growth for Spanish-speaking ELLs.

Existing data documents that North Carolina's TWI programs have met with a great deal of success for over ten years (NC Public Schools, 2010; Thomas & Collier, 2011, 2012; Whittenberg, 2010). However, a large majority of the programs that offer the greatest successes for ELLs have been developed, conducted, or studied in isolation; there are few programs that address our low-performing ELLs on a larger scale. Many of the studies focus on a small sample of students, a program in a specialized or magnet school setting, or a

school within a district that is piloting a program to address their concerns regarding ELL education. Some districts trying out DL programs fail to study cohort data to evaluate the program's success until years after implementation (Collier & Thomas, 2014; Thomas & Collier, 2012). Even more difficult to find is a study that shows the success of a large number of DL program being implemented across entire district. Large-scale implementation is a much bigger problem than just developing an effective program to teach English language learners. Considerations of resources, politics, and policy ramifications can prevent educational professionals from reaching consensus on programs of this nature (Meyer, 2004). Developing adequate resources, both fiscal and human, and providing professional development to deliver program models have been cited as immense challenges for education agencies in all regions of the country (August et al., 2009; Capps et al., 2005; Thomas & Collier, 2009, 2012). Considering the failure to develop sound educational systems promoting the growing demographic of Hispanic ELLs in North Carolina, complex issues must be addressed concerning how we educate this group of children in our public schools. These challenges must be tackled head-on in order to build programs targeting academic equity for North Carolina's expanding Spanish-speaking ELL population.

Conceptual Framework

In consideration of the multiple frames by which this research might be examined, the lens of equity through application of social justice and Latino critical theory has been applied. Access to an equitable education is a right guaranteed by the Constitution of the United States, regardless of race, creed, color, or citizenship status (Bitensky, 1991). According to Thomas and Brady (2005), the Elementary and Secondary Act promises to provide equity through Title I by "Improving the Academic Achievement of the

Disadvantaged,” and ensuring “that all children have a fair, equal, and significant opportunity to obtain a high-quality education” (p. 56). To address what constitutes socially just practices and methodologies addressing Latino critical theory for Spanish-speaking ELLs, this study emphasized components of instructional delivery that promoted academic proficiency in literacy for this group of Spanish-speaking ELL students.

The conceptual notion of social justice theory seeks to offer equitable opportunities to all students despite being part of marginalized and underprivileged minorities. Brown (2008) highlights social justice as a key component of preventing these students from falling into a “predetermined mold designed for school failure and social inequity” (p. 701). The result of educational institutions that fail to embrace the tenets of social justice is marginalized students being “left behind” without equal access to the excellent education to which all children are entitled. Greene (2000) holds that the role of all educators is to transform learning for all students. Greene points out that transformation is about going beyond ordinarily accepted limits to support those who struggle for societal equity and want multilingual educational programs as a building block of social justice. She further states that the task of eliminating the struggles of minorities to achieve equity through an appropriate education lies with the institution of public schools. Through their support, social justice can be achieved by honoring heritage languages and creating a multilingual society. Further support for framing this study in social justice theory lies in the belief that language minorities are held as less important members of society and as such are subject to strong institutionalized oppression. By upholding the right to multilingualism, the mechanisms through which society and schools oppress less powerful groups into shame and silence are denounced (García & Guerra, 2004).

Equally notable is Latino Critical Theory (LatCrit), highlighted by current research in the quest for justice in education for students from Latino backgrounds (Colon-Muñiz & Lavadenz, 2015; Huber, 2010). LatCrit is an extension of critical race theory in education, which focuses on experiences unique to the Latino/a community such as immigration, language, ethnicity, and culture (Huber, 2010; Solórzano & Yosso, 2001). This framework was used to identify specific ways in which the Spanish-speaking ELLs experience education within the TWI programs. While demographic differences may have dictated the structure of each of the participating schools, leadership was also a factor in determining how positively the community embraced the dual language program and its Latino/a members. The role that educational leaders play in establishing a culture of equity and social justice is equally important to the diversity faced in public school classrooms across the country (Skrla, Garcia, Scheurich, & Nolly, 2002; Thomas & Collier, 2014). A study conducted by Santamaría (2013) examined the impact of educational leaders who transform theory into practice. Santamaría established the premise that leaders for social justice and equity are primary to building inclusive and equitable education, and this leadership framework can help to build equitable means for finding solutions to the challenges resulting from increased school diversity. LatCrit theory can provide leaders with a socially just platform which honors the culture and language of SSLEPs in the delivery of explicit teaching strategies.

There is a clear and urgent need for public schools to embrace opportunities provided for the growingly diverse body of students attending our public schools whose primary language is not English. A particular focus was placed upon the limited-English proficient population with the intention of closing the largest achievement gap existing across all subgroups (NCES, 2009; NC Public Schools, 2010). This study highlighted a means by

which LEPs can attain the same access to a sound education that is afforded to our native English-speaking students to provide them every opportunity for success in our schools.

Research Questions

The primary research question driving this study is: “How do the established TWI programs currently employed in NC promote the literacy proficiency of Spanish-speaking LEPs?” Equally important is the teacher perception of the effectiveness of the TWI programs: “How do TWI classroom teachers describe the most successful strategies promoting student proficiency in literacy in their classrooms?” Other questions relative to what they are doing to achieve this result include: “What specific strategies being employed are associated with the greatest success within the TWI programs”; and “Is there consistency in structure and application across different programs to validate these findings?” Finally, in order to ascertain methods that are held in highest regard by the administrators and teachers within the programs, “Do the quantitative data support the qualitative findings from the interview and questionnaire data?”

Rationale of Research Design

Very few studies exist that show successful implementation of systemic improvements in ELL achievement (Viadero, 2009). According to the Center on Enhancing Early Learning Outcomes (2015), the most difficult barrier to developing best practices for teachers and administrators in dual language programs is that there is not enough research to support a particular curriculum or instructional strategies that work best for dual language learners. This proposed study aims to increase the body of knowledge for the educational community and policymakers regarding instructional strategies that are identified as most successful for promoting academic literacy skills in Spanish-speaking LEPs.

The use of a mixed methods approach (Creswell, 2008; Leech & Onwuegbuzie, 2009; Teddlie & Tashakkori, 2006) will first examine each of the participating schools as a case study, and then comparative analyses will be done to establish external validity by cross-referencing the findings in each district and of all ten participating schools in the state. This process was used by L. M. López and Tápanes (2011) in a study conducted of Latino children attending two-way immersion programs in the United States. Their design contained a qualitative dominant status using multiple methods of data collection including parent interviews, field notes, transcriptions, and questionnaires. Analysis of their data was done using *Atlas.ti* 5.2 (Muhr & Friese, 2004) to compare across the case studies, which followed nine students and their families from entry into kindergarten through the end of first grade. Matrices were compiled to examine relevant themes, which resulted in a better understanding of the population of Latino families who had chosen to enroll their children in two-way immersion programs and the academic progress of these students in both English and Spanish. This mixed methods design yielded a rich set of data from which the authors drew pertinent and timely information regarding the teaching of Latino students in two-way immersion programs. Analyses that were included in this current study included a matrix of relevant themes in instructional strategies and program structure, a comparison of quantitative data supporting academic growth across the ten schools, and a universal comparison of the reading proficiency of LEP students in these TWI programs to all LEPs in the state of North Carolina.

This study will utilize a partially mixed sequential dominant status mixed methods design outlined by Leech and Onwuegbuzie (2009), which uses a two-phase approach in collecting data. Leech and Onwuegbuzie emphasize the importance of mixed methods to

“obtain an intricate understanding of the meaningfulness of participants’ experiences” (p. 270). A sequential design purposefully applies one model of research before the other (i.e., qualitative during Phase I, and then quantitative during Phase II). Creswell (1995) and Greene (1994) cite sequential development as one of the five main reasons for using the mixed methods approach. The other four top reasons include triangulation, complementation, initiation, and expansion, which may also support the use of mixed methods in this study. According to Noblit (2008), qualitative data allow the researcher to obtain empirical knowledge of the subjects’ typical experiences working in and with the program of study. The use of qualitative measures may also shelter some bias in regard to the perceived success of each site and the competition across the ten schools included in this study. By including the qualitative data, and not basing evaluations of success solely upon quantitative results of standardized assessments, a richer set of what is working to promote success for these ELLs may be obtained.

According to leading researchers (Creswell, 2008; Glesne, 2011; Greene, Camilli, & Elmore, 2006; Leech & Onwuegbuzie, 2009), the use of qualitative analyses in mixed methods research regarding school success is critical in obtaining a more complete picture of “how” and “why” programs were producing their respective results. Therefore, qualitative data was collected during Phase I with the use of program leader interviews and teacher questionnaires with no overlap of quantitative data collection. This was done with the intention of capturing the participants’ perspectives on program methods and student success without the analysis of assessment data, or “proof,” that the program was or was not working based upon the quantifiable data often used by studies of education programs using solely quantitative methods.

An examination of quantitative grade-level cohort data, whole school data, and student assessment data was applied during Phase II. These sets of data were used independently and as part of cross-case analyses to correlate claims of programmatic success. Support for this research design is explicitly reviewed in *The Handbook of Complimentary Methods in Education Research* (Greene et al., 2006), in which the authors state, “as an argument for the cross-case analysis, the mixed method approach often results in a wealth of overlapping data” (p. 137). The potential for rich, complex sets of data existed by giving attention to the qualitative factors involved in implementing TWI programs on the micro-levels, and extrapolating results of these findings with the evidence in the quantifiable assessment data collected. While test scores often give the perception of success or failure of these programs by analyzing student reading scores, the practical implications of administering these programs was examined through a qualitative cross-analysis of both phases of the study.

Site Selection and Participation

Purposeful sampling was used to develop criteria for school to be included in this study. As noted by Creswell (2008), the main idea behind qualitative research is to select participants or sites that will best help the researcher understand the problem and find answers regarding the research question being asked. Isolating districts with dual language programs in the state of North Carolina, this study attempted to identify the barriers that must be overcome in the process of building a successful, systemic program for English learners. Leaders of the development and implementation process were identified and interviewed in a semi-structured format (see Appendix A), as suggested for qualitative research by Wengraf (2001). A focus was placed upon the structures established to promote academic success

using two-way dual language immersion. These interviews helped to establish TWI program practices and allowed participants to evaluate the levels of success experienced by their native Spanish-speaking ELL students.

In order to access potential sites and participants, a matrix of language immersion programs in North Carolina (North Carolina Department of Public Instruction, 2015) was used to identify districts currently employing bilingual programs, resulting in 27 districts currently employing dual language immersion programs in 95 schools. The exclusion criteria denoted in Table 3.1 were used to narrow the site selection to 16 schools. These filters were applied to obtain comparable case study samples which shared common attributes of two-way immersion programs and student populations in the state. Upon completion of the initial exclusion process, six districts housing 16 schools with dual language two-way immersion models being implemented in grade levels ranging from kindergarten through eighth grade remained. Further exclusion of the remaining sites was applied to those in operation for less than five years and was done for two reasons: (a) to eliminate program bias based on the “exploratory” nature experienced in the first years of a new program; and (b) to have a substantive amount of assessment data from all schools for third- through eighth-grade students participating in two-way immersion. A final filter to determine “success” of these sites applied the inclusion in the noted study on effective dual language schools in North Carolina (Thomas & Collier, 2011). The result upon completion left five districts housing 11 sites to be invited to participate in the study (see Appendix B).

Table 3.1

Site Selection Exclusion Process

Exclusion Criteria	Number	# Schools
Schools in North Carolina with Dual Language Two-Way Immersion Programs		95
Full-immersion programs primarily targeting native English speakers	45	50
Partial-immersion programs primarily targeting English speakers	17	33
Independent, charter, and private schools	5	28
Two-way immersion programs not targeting Spanish speakers	1	27
Developmental bilingual, designed to maintain heritage language	1	26
Schools in districts with less than two schools using TWI programs	10	16

Using data obtained from North Carolina Report Card (2017), an analysis of quantitative assessment data from End-of-grade reading tests for the 2015-2017 school years was also conducted to affirm the notion reading success for LEPs. From a pool of nearly 2,600 schools in 115 districts in North Carolina, the reading scores for LEPs in these districts denoted greater success in comparison to the reading scores of all LEPs across the state, with 9 of the 11 schools having above the state average grade-level proficiency for LEPs (see Appendix C). These proficiencies do not, however, take into account which LEPs were assigned to the TWI programs and which were in traditional classrooms, so it was important to gain access to student data in the study to appropriately group students for further analysis.

To engage participants, support was solicited through contact of the district liaison for educational research using a cover letter and explanation of the purpose and magnitude of this study, as well as its relevance to the programs included (see Appendix D). District requests for conducting research were filed for approval, and follow-up emails were sent to district coordinators to further invoke participation (see Appendix E). Three of the five districts included in the filtering process agreed to become part of the study, which included

eight TWI dual language schools across North Carolina. Upon approval, and through informed consent of study participation, phone contact was initiated with dual language TWI district program coordinators and site-based administrators. A corresponding letter was sent to advise the selected participants of the study and the need for their support in this research (see Appendix F). A choice of in-person or virtual conference interview options were offered as a means to promote greater participation and accommodate administrators' busy schedules. Disclosure of the use of this information as dissertation research and security measures to secure the data were explained, and participants signed a formal consent form (see Appendix G). They were advised of their rights for privacy and how to obtain copies of all written material submitted as a result of this study. A request was made to provide the researcher with information regarding their programs, resources, and data being used in their schools.

Data Collection

A combination of qualitative and quantitative data was used in two phases of the study to analyze these TWI programs in a partial mixed methods approach. This was done sequentially to maximize the potential for answering the research questions (see Figure 3.1). The perspectives of those overseeing and administering the instructional strategies being highlighted was essential for establishing a more well-rounded picture of how their programs were working to improve academic success for LEPs. The sequential nature of this study was critical for answering the primary research questions. To collect the most applicable set of qualitative data from the interviews and questionnaire, a hierarchal order was followed, allowing for revisions to the questions being asked in subsequent interviews and on the teacher questionnaire. The teacher questionnaire collected both qualitative and quantitative

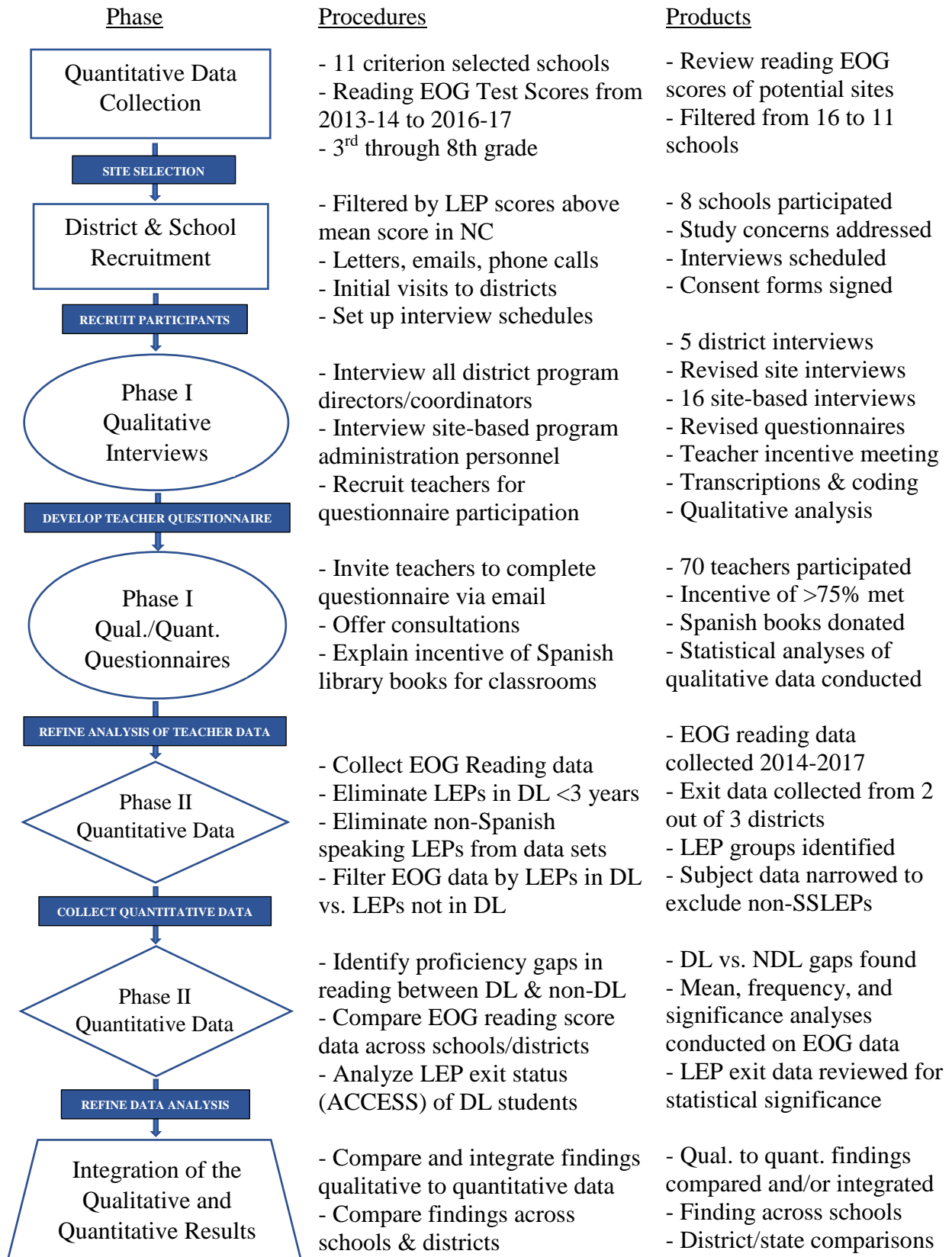


Figure 3.1. Visual model for mixed methods sequential design procedures.

responses, thus leading into the quantitative data collection in Phase II. The omission of discussions revolving around quantitative data was done purposefully in order to elicit more personal responses from participants regarding their programs and to ascertain the “stories” behind “how” and “why” the educators in these schools believed their programs were successful. Quantitative assessment data was collected and analyzed upon completion of Phase I to collect more esoteric data during the interviews and questionnaires.

In order to acquire a large enough sample of interview question responses ($n=10$), a purposive sampling method (Ritchie, Lewis, Nicholls, & Ormston, 2013) was used, seeking perspectives from both the district dual language program coordinators who train TWI staff and evaluate the validity of the program and the site-based administrators overseeing TWI program implementation. Questions for these participants (See Appendix A) utilized the “semi-structured” format outlined by Glesne (2006). The interview structure was developed through models cited in works by Fraenkel, Wallen, and Hyun (2011) and Wengraf (2001), with questions developed to derive valid and reliable data from participants. These qualitative interview strategies were applied to develop sound arguments and elicit open-ended responses. To promote trustworthiness (Coffey & Atkinson, 1996; Creswell, 2003; Marshall & Rossman, 2011), all interviews were audio-recorded and subsequently transcribed and coded for accuracy.

Instructional models being referenced during qualitative data collection were derived from extensive research on common best practices noted by experts in the field of dual language education. These strategies highlight methods currently employed across the country for English language learners with concurrence of their success. Two models of two-way immersion have been identified as the most effective in meeting the needs of ELLs and

promoting high achievement in reading, including the 90-10 model, or “gradual immersion,” which emphasizes 90% instruction in the primary language in kindergarten and gradually increases English immersion through third grade (Alanis & Rodriguez, 2008; Genesee, 1987; Lindholm-Leary, 2001; Thomas & Collier, 2006), and the 50-50 model, or “constant immersion” which employs instruction for half of the academic school day in the primary language and the other half in English from kindergarten through fifth grade (Francis et al., 2006; Gersten, Baker, et al., 2007; Thomas & Collier, 2012). The model in place at respective research sites was noted in the interview process, as well as the emergent 80-20 model, and was included for comparative analyses in the study.

In addition to noting the program model being implemented, instructional components were identified for use during this study to measure their perceived rates of success. The six most commonly used student support strategies, which have been identified by experts in the field as highly effective in producing success in reading for ELLs enrolled in two-way immersion programs (see Chapter 2, Table 2.4), were chosen to be evaluated during this study. These strategies, which may vary in structure but have strong common objectives, have been grouped by generalized instructional traits. These were rated by program leaders and teachers during qualitative data collection and include the following:

- small group guided reading instruction, which targets individual literacy needs, allows for support in the target language, and is noted for its high rates of success in reading improvements for ELLs (August & Shanahan, 2006; Gersten, Baker, et al., 2007; Gregory & Burkman, 2012; Saenz et al., 2005);
- dual literacy practices, embracing the use of teaching literacy in both languages simultaneously and applicable in both the 50-50 and 80-20 models with strong

support for its use (August & Shanahan, 2006; Chen & Yildiz, 2010; Krashen, & McField, 2005; Rolstad et al., 2005; Slavin & Cheung, 2005; Stone et al., 2016; Thomas & Collier, 2002, 2012);

- Content-based instruction methods, which create meaningful connections to what is being learned and the structure of the language being taught—this strategy is a common component in most immersion programs associated with successful student outcomes (Alanís & Rodriguez, 2008; August & Shanahan, 2006; Barr et al., 2011; Genesee, 2006; Gersten, Baker, et al., 2007; Meltzer & Hamm, 2005);
- vocabulary development, which strengthens students’ ability to comprehend what they read and produces high enrichment when oral language is an included component (Barr et al., 2011; Cárdenas-Hagan et al., 2007; Dressler & Kamil, 2006; Lesaux & Geva, 2006);
- heterogeneous collaboration, supporting active cooperation and genuine interaction of student participants, as well as fostering mastery of the opposite language while exploring, creating, and solving problems as a team (Alanís & Rodriguez, 2008; August & Shanahan, 2006; Barr et al., 2011; Calderón et al., 1998; Cheung & Slavin, 2012; Francis et al., 2006; Gersten, Baker, et al., 2007; Murphy, 2010); and
- bridging, which includes strategies for teachers to bridge new concepts to previously held information, as well as specific bridge constructs which allow for the knowledge gained in one language to be transferred in context to knowledge and comprehension of the content in the other language (Di Stefano, 2017; Martin-Beltrán, 2010; Ray, 2008; Spicer-Escalante, 2017).

The use of these practices was rated for their success in each of the programs and used for data analyses in this study.

The final element of program analysis included in the evaluation of its overall effectiveness during the qualitative data collection was the structure of professional development used to support these specific TWI literacy instruction practices. This component was highlighted in research and identified as a strong contributing factor to the success of any dual language program being used across the country (Barr et al., 2011; Gersten, Dimino, Jayanthi, Kim, & Santoro, 2007; Li & Edwards, 2010; Parrish et al., 2006; Short & Fitzsimmons, 2007; Theoharis, 2009). Dual language models varied drastically, so it is critical for districts employing immersion programs to continuously review the effectiveness of their instructional practices and adjust their program model accordingly. Professional development in strategies and practices to support consistent implementation becomes a key component to the success of any dual language program (Darling-Hammond, 2012, Thomas & Collier, 2012).

Further qualitative data were collected at the completion of all interviews with a follow-up questionnaire offered to all TWI classroom teachers (see Appendix H). This was an optional component with the hopes that at least 25% of the more than 150 teachers involved would choose to participate (see Appendix I). The corresponding questions and answers from both interviews and questionnaires were coded to establish (a) program models being used in the schools; (b) success criteria applied by site administrators and district program directors which are evaluated for their levels of success in the TWI classrooms in these schools; (c) instructional strategies being used and the degree to which they are perceived as creating student academic success; (d) additional benefits reported due to

inclusion of the dual language program in the schools; and (e) the sociocultural benefits that were identified as inherent in inclusion of a dual language program in the schools. The qualitative teacher data gained through the follow-up questionnaire were used comparatively with administrative notions regarding program success criteria and the levels of success of the instructional strategies being implemented (see Appendix J). A series of inquiries drove the information-seeking sessions included in the two data collection phases of the study. Following the sequence chart (see Figure 3.2), the questions asked during interviews (IQs) and on teacher questionnaires (TQs), and the data retrieval (DR) completed in the second phase of the study helped to answer the research questions. The questions were used to determine the following:

- How was student academic “success” measured by district- and site-based program administrators for students enrolled in TWI programs?
- What instructional strategies and professional development were being used, and which of these, if any, were associated with the greatest success for ELLs?
- What did TWI classroom teachers think were the most successful strategies promoting student success in reading in their classrooms?
- What did the data show regarding levels of success in achieving reading proficiency and growth as measured by annual standardized tests given in North Carolina?
- What percentages of students who had consistently participated in these TWI programs had exited LEP status and gained formative English proficiency?

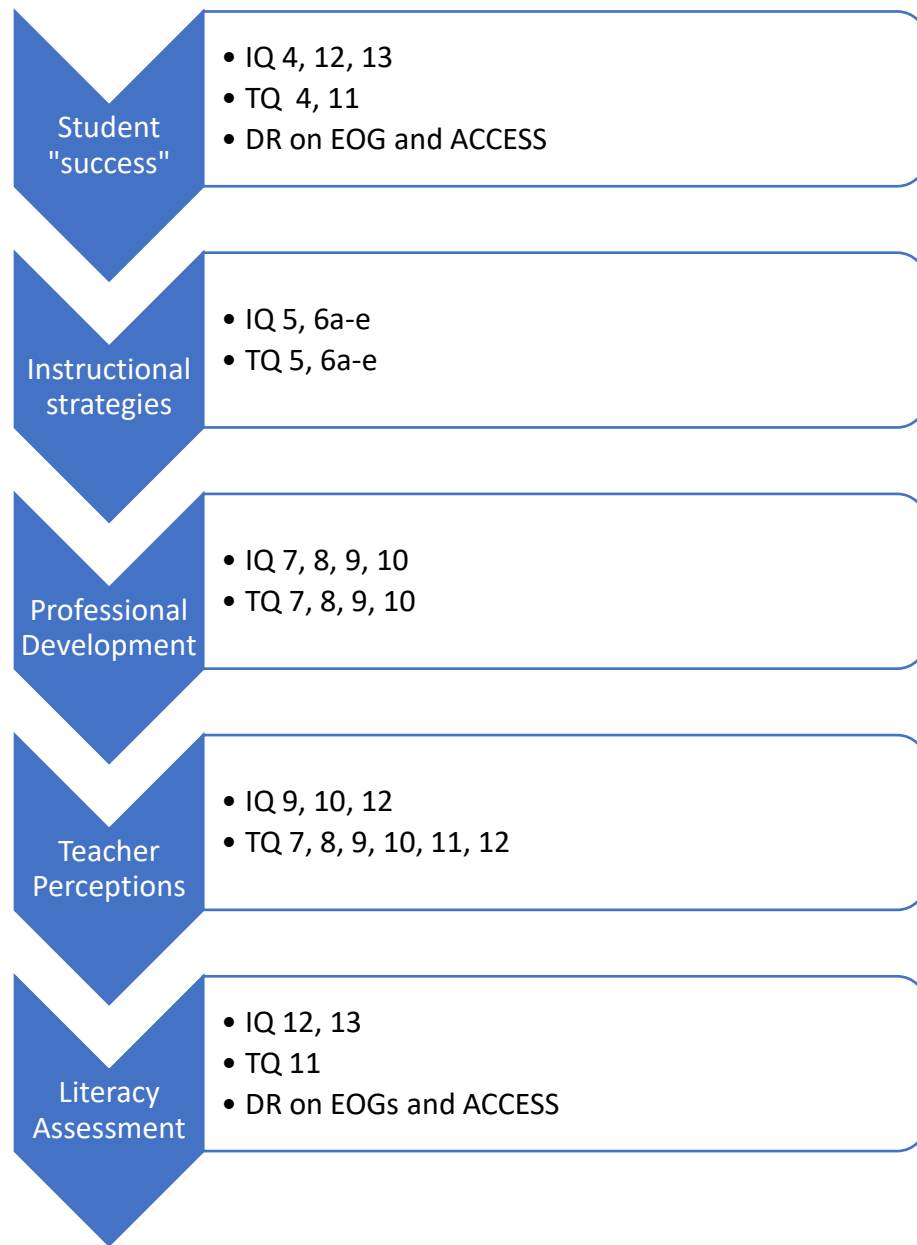


Figure 3.2. Coverage of driving inquiries.

Alignment of Study Inquiries to Potential Outcomes

Information gained from the qualitative research guided the analysis of the data collected and served to identify specific data to be analyzed during the quantitative data review. During the second sequential phase of data collection, the analysis of internal assessment data included: (a) annual EOG reading assessment scores of native Spanish-

speaking LEP students (SSLEPs), both in TWI programs and not enrolled in TWI programs, by school and by district; and (b) the annual percentages of native Spanish-speaking student cohorts enrolled in these programs for at least three years between school years 2013-14 through 2016-2017 who exited limited English proficiency (LEP) status as measured by North Carolina annual ACCESS language proficiency tests. These quantitative data were applied both independently and comparatively across student groups, participating sites and districts, and the state of North Carolina.

Cross-study analyses including data collected in both phases of the study commenced upon completion of all collected data during the final stages of data analysis. The theoretical lens of social justice and LatCrit theory was applied to the data analyses in three ways:

(a) By establishing perceived patterns of academic success for SSLEPs participating in the TWI programs in comparison to the patterns established by SSLEPs within the selected sites who are not enrolled in the TWI program; (b) By comparing academic reading success of SSLEPs in participating sites to those not in the TWI programs within the three districts as evidenced by a review of their EOG reading scores; and (c) By comparing the LEP exit rates of SSLEPs in the study to the exit rates for all LEP students across the state of North Carolina. This was done to establish whether program delivery afforded this subgroup greater academic success and content mastery than traditional schooling practices currently used in public schools.

Role of the Researcher

The researcher assumed the *learner* role in these interviews to set aside personal perspectives and assumptions to fully attend to what participants shared with regards the process implementing their TWI program. This also allowed district leaders to assume the

role of teacher or expert during the interview, which typically lends itself well to educational leaders. The sequence that was followed during the process of this mixed-methods study included the five steps illustrated in Figure 3.3. Through use of interviews, participant strategies to build instructional practices for their dual language TWI programs were explored through the implementation of professional development and the adoption of specific instructional strategies. Prior to the onset of the semi-structured interviews (see Appendix A), trust was built with the interviewees by asking them general questions about their work, such as the “grand tour” question referred to by Glesne (2011). This was followed by a briefing of the purpose and intention of the interview and allowed the opportunity for participants to ask questions regarding the interview process. Once it was clear the participants were willing to share details of their program, they were asked to allow the interview to be audio-recorded to prevent mistakes in its transcription. The semi-structured format commenced with an estimated time for completion of one hour.

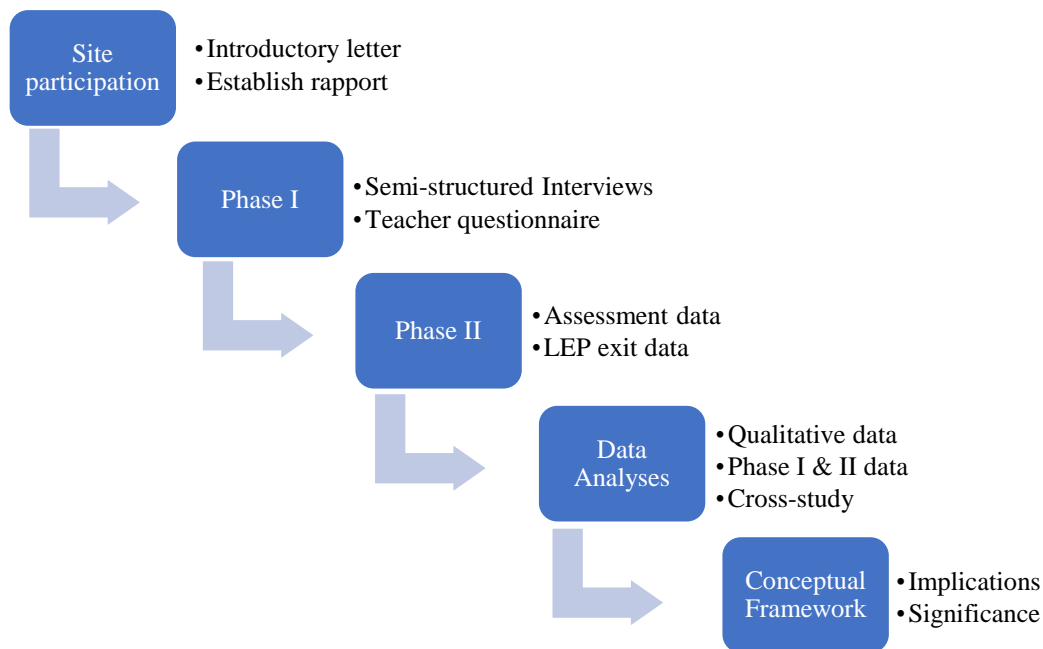


Figure 3.3. Research process for TWI Spanish dual language programs in North Carolina.

The Mixed Method Study Design

A preconceived notion of the researcher regarding the hierarchy of district education is that the decisions regarding educational policy and practice are often perceived differently from teaching staff than they are from administration. Attempts were made to not allow the researcher's assumptions to influence notations during the interview and transcription process, as they are causal factors to the selection of two sets of participants with distinctly different roles in the process of program implementation. This particular dynamic, with leaders viewing programs at the macro-level in one way and those implementing programs at the micro-level viewing things quite differently, seems to be evident in every component of education policy in public schools as well as in other areas of business. In order to garner the voice of the teachers, this researcher recognized that policies and programs may be adopted by districts despite the potential for non-compliance at the school level. Evidence of any influence these two collaborative roles had upon the process of evaluating their TWI dual language programs was also explored.

Phase I: Qualitative Data Collection

The environment in which these interviews were conducted played a critical role in the outcome and quality of responses achieved from this interview format (Creswell, 2005; Greene et al., 2006). A convenient location in which to conduct these interviews was determined, and interviewees were invited to choose a location near them that was both quiet and comfortable. A recommendation was made to choose a location out of their office, if possible, so that interruptions could be minimized and allow participants to be more at ease. An established time of one hour was adhered to, except in several cases where the interview progresses in such a way that both participants were eager to continue. The affect of the

interview participants was noted to record the emotive nature of their responses and to denote their comfort level discussing this topic to determine accuracy in reporting. Through interviews with district program coordinators, and subsequently aligned interviews with site-based program administrators (see Appendix A), qualitative data were derived. A supplemental chart of the aforementioned instructional strategies most commonly used in two-way immersion programs was given to participants during the interview process for reference and rating (see Appendix K).

During the final stage of Phase I, teachers currently working directly in the TWI classrooms received an email requesting their participation in a TWI teacher questionnaire with an anonymous direct link to the survey using Qualtrics software (see Appendix L). This questionnaire was based upon the responses given from the preceding interviews and was sent electronically. This questionnaire mimicked the questions and rating scale used in the interviews and elicited feedback regarding teachers' perspectives of the rates of success achieved by their students through use of the program model, instructional strategies being used in their classrooms, and staff professional development provided to them on two-way immersion dual language practices (see Appendix H). The potential number of teachers currently working in the TWI classrooms included in the study included 117 practitioners. It was the intention of the researcher to establish a shared interest in the purpose of this study with the teachers, encourage them to be a part of this important data collection, and promote increased interest in questionnaire participation. An incentive of Spanish books for grade-level libraries was offered if teacher participation was greater than 75% and for individual classroom libraries if teacher participation was 100%. One school in the study had a

participation rate which exceeded 75% so they were awarded the grade-level book set incentive.

Phase II: Quantitative Data Collection

The second phase of data collection consisted of the acquisition of large sets of assessment data over a 4-year period from 2014 to 2017. Some of these data sets were collected by the researcher prior to working with district and school data management personnel through use of the North Carolina Education Research Data Center (NCERDC) at Duke University in partnership with the NC Department of Public Instruction. Data was also collected through collaboration with district data personnel. Disaggregating these data was completed at times convenient to the staff schedule with minimal assistance from personnel. Assistance was needed primarily for dividing the data into subsets of students enrolled in TWI and students not in TWI, eliminating tested students who have been in the program less than three years, and on gathering LEP exit data from each of the participating schools. This study collected data on all Spanish-speaking LEP students within the schools and filtered out those who were enrolled in the TWI program for less than three years. Collection of the quantitative data was acquired throughout the study, but analysis of the data was conducted after all qualitative data had been acquired, coded and analyzed.

A quantitative analysis of two types of assessment data was conducted. The first set consisted of End-of Grade (EOG) reading assessments administered to all third through eighth grader SSLEPs attending these schools from year 2013-2014 through 2016-2017 to determine English reading proficiency. Several districts did not have complete sets of this data and it was not available through the NCERDC, so complete sets of this data included EOG reading test scores from 2015, 2016, and 2017. These test data were used independently

to determine the level of success in each school and were also analyzed comparatively across the district and all participating sites in order to correlate and triangulate the degrees of success overall. The second set of data included ACCESS English proficiency assessments administered to LEP students in kindergarten through eighth grade attending these programs from school year 2013-2014 through 2016-2017. This data set, which measured student English proficiency for ESL students and is required by Title III legislation (Gándara & Merino, 1993), was used to determine the percentage of LEP students exiting from the LEP category and was also included in the evaluation of program success. If the TWI strategies were promoting reading proficiency at a higher rate than schools not using TWI strategies, then it seemed that the corresponding scores on the ACCESS test should also increase, resulting in the attainment of formative English proficiency (FEP) status being achieved.

Data Analysis

To explain the relationship of data collected to the framework of this study, the interview information was used to develop an understanding of instructional strategies and the evaluation of their effectiveness in the participating schools (see Figure 3.4). The lens under which the data was analyzed was based upon the conceptual framework derived from noted experts in the field of education (Brown, 2008; García and Guerra, 2004; Greene, 2000; Santamaría, 2013; Skrla et al., 2002; Thomas & Collier, 2014) outlining educational equity and socially just education for non-English speakers in U.S. public schools. This included preliminary coding schemes based upon equitable access to education through attention to LatCrit theory (Brayboy, 2005; Lynn & Adams, 2002; Matamanadzo, Valdes, & Velez-Martinez, 2016; Solórzano & Yosso, 2001; Yosso, 2005) and socially just practices being applied. Reflection of both the equitable nature of the programs studied and their

subsequent ability to provide socially just, LatCrit sensitive education for marginalized non-English speaking students allowed analyses to be viewed through this conceptual frame.

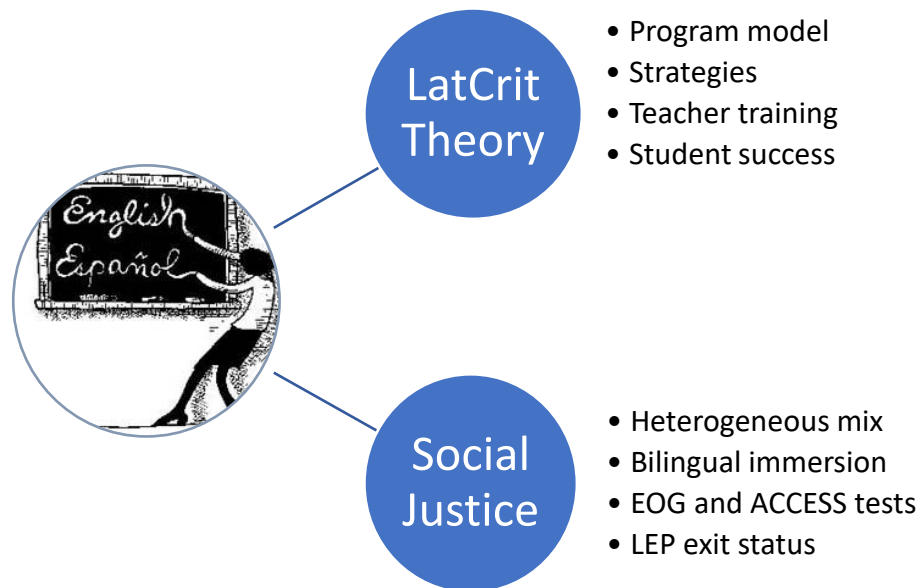


Figure 3.4. Research questions aligned with conceptual framework.

Both practical applications of the strategies and assessment criteria to determine success were explored. As suggested by proponents of mixed methodology research (Creswell, 2008; Glesne, 2011; Greene et al., 2006; Leech & Onwuegbuzie, 2009), field reports, tape recordings, and preliminary coding schemes were employed in anticipation of further complexity to evolve with the addition of new data. Constant reflection on the information being collected, biases that were brought to the study based upon the researcher's experiences or assumptions, and pre-drawn conclusions were identified in an attempt to transcribe interview notes with fidelity. Primary coding schemes included the concepts of 'program structure' and 'strategies,' 'success measures' and 'academic benefits, and 'socio-cultural relevance' with specific attention to socially just and LatCrit sensitive practices. "Data application" was also applied to denote times when the participants referred to data used in formulating decisions regarding implementation of their TWI model, although

no formal review of data was presented within the context of the interviews. Secondary codes that emerged were driven by consistent patterns, and emergent codes were applied due to their significance to the study or by virtue of the theoretical framework being applied. Categories that had direct and indirect relational value became apparent, and the evaluation of coding methods was conducted by an outside expert in the field of qualitative research and analysis to ensure no bias emerged in the process.

Qualitative data analysis (QDA) software as advocated by researchers in the social sciences (Hwang, 2008; Lewis, 2004) who have found that using this QDA in its updated Windows version of 5.2.12 makes application of field notes much more complete. It allows for coding schemes to be applied as notes are entered into the software using open coding schemes. The merging of subcategories or the establishment of new codes to identify phenomena not previously noted emerged, which resulted in the need to review earlier transcripts to ensure parallel coding schemes were applied. Conclusions drawn from these data allowed the utilization of interview transcriptions and questionnaire responses to be compiled for consistencies and patterns in the data. Patterns that emerged from cross-analysis of these studies (See Appendix J) shed light on district and school-based strategies being used for TWI literacy instruction that afforded students the greatest success. These datasets were also correlated to corresponding quantitative data at the analysis stage of the study.

Significance of the Study

The intended outcome of this study to derive a list of instructional strategies being implemented in TWI resulting in success for Spanish-speaking ELLs in dual language programs across North Carolina was a success. One district initiative and three instructional strategies noted in the literature, as well as two new instructional practices emerged from this

study which also showed great potential for improving DL programs. Compiling independent data by schools and districts allowed for a case study of each site, with the potential for site-based analysis which provided aid in the decision-making process of policymakers in each respective district. The cross-study comparative analysis exposed similarities in program design and practice and helped to identify patterns of success and failure across participating schools in the study. Also resulting from this study were notable differences in the program design, delivery, and district infrastructure of the dual language programs, which allowed for analysis of the relativity these differences may have had on student reading assessment results. While two districts which fully implemented all of the noted successful strategies showed tremendous academic superiority for SSLEPs in TWI, one district which failed to utilize many of the noted strategies subsequently showed the lowest rates of proficiency and success for its SSLEPs enrolled in their TWI programs. A final analysis was applied when using the reading assessment proficiency percentages of Spanish-speaking students within the participating TWI schools in comparison with the average proficiency rates of LEPs across the state of North Carolina.

Findings from the study revealed that the methods employed within two of the three of the districts promoted greater success and a socially just, LatCrit sensitive education to Spanish-speaking ELLs. Ideally these data will inspire future studies of these practices targeting ELLs, professional development models to address adequate support needed to properly implement these instructional strategies and may eventually become part of a body of educational research which fuels the development of such practices to be implemented across the state. Currently, there is a lack of studies that focus on curriculum and strategies targeting the specific needs of Spanish-speaking LEP students, so this study serves to inform

the educational research community in North Carolina regarding best practices for Spanish-speaking ELLs through use of TWI programs. The results of this study also illuminated a means by which ELLs across the state may obtain equal access to high-quality education which yields socially just, LatCrit sensitive practices and promotes greater academic success for Spanish-speaking LEPs.

Assumptions

Placing all participants in one category with measures of student success being identified by the practitioners working in the TWI programs assumes that all ELLs are the same, although there may be significant differences in their educational makeup, which may be noteworthy. Isolating the variable for low socio-economic states was not done, since over 76% of SSLEPs receive free-and-reduced lunch, thus placing a large majority of them in this subgroup. Since economic disadvantage is often associated with low student performance, including this as a control variable may provide different results. This study did not isolate other potentially viable variables for the students besides being enrolled in the TWI programs and included only Spanish-speaking LEP students. Variables regarding the length of time each participant had been involved in the program were controlled for with the elimination of data from student who had not been in the programs for at least three years, but those who began in pre-k or in later years of their schooling were not configured in the data analyses, which could potentially impact their success. This allowed for streamlining during the disaggregation of the collected qualitative data. Other assumptions regarding student assessment data worth noting are that those findings which show a relationship to the qualitative data collected can be impacted by other variables not controlled for, such as the community economy, race, learning disabilities, or other developmental issues students face.

The number of years which educators had been working in the field was included, and only those who had not spent at least one year were eliminated. This assumed that all members participating had a well-grounded perspective on their program and practice, and that instructional delivery was consistent. For any participating members in employment with the TWI program for less than one full calendar year, their responses were systematically removed from the pool of data, via question number one on all interview protocol and teacher questionnaires. This was based upon the assumption of the researcher that they did not have enough professional exposure to the program to fully articulate their perspective. Furthermore, the focus on Spanish-speaking ELLs is not without consideration of the bigger picture, which includes ELLs from a multitude of other native-language backgrounds. The assumption has been made that the information garnered from this study, with the large majority of ELLs being native Spanish speakers (in North Carolina, 83.9%; in the United States, 77%), will be universally applicable for any other native-language English learners, thus benefitting all ELLs across the state.

Limitations

Because there are currently no districts in the state of North Carolina that have adopted TWI dual language programs on a large scale, with no districts having more than 3 schools currently adopting TWI programs, the data collection included in this study was void of that information. It is also important to note that with limited data regarding the success of students in TWI programs over those in monolingual programs, a question may be raised regarding the external validity of this study. In order to apply the success of Spanish-speaking students in these programs, research of the success of English-speaking students enrolled in the same TWI programs to discern its applicability across all demographics would

be prudent but was not completed within this study. However, comparisons of LEP students enrolled in the selected Spanish-language TWI programs to LEP students not enrolled in these TWI programs was done. The comparisons made to state LEP proficiency rates included all LEPs, not just Spanish-speaking LEPs, thus creating data that could conflict with the qualitative focus being placed solely on Spanish speakers. However, the results of those comparison still showed the TWI SSLEPs outperforming the state average proficiency rates for LEPs in most cases. Lastly, the primary investigator's experience as an educator and novice status as a researcher may have served to influence the study outcomes.

Another acknowledgement necessary to consider is that the achievement gap exists between SSLEPs and all major subgroups, including White, Black, Asian, Hispanic English-speaking, economically disadvantaged, learning disabled, etc., yet this research did not examine that phenomenon nor how it might influence the outcomes of dual language education. Also critical to the success of any academic program is the socioeconomic status of families in attendance at these schools, which often shows some of the greatest achievement gaps (National Assessment of Educational Progress, 2010; North Carolina Report Card, 2013). Perhaps school leaders may have shed light on how that factors into the equation, but there is no data set within this study to include that potentially pertinent criteria. The role that the family structure plays in the success of our students is another tremendously influential variable to consider (Collier & Thomas, 2014), yet this study recognized it as a delimiting factor which was not reviewed within the context of this research.

Finally, by focusing on the conceptual framework of social justice and Latina/o Critical Theory (LatCrit) in education for Spanish-speaking ELLs, the study's relevance to other potentially applicable educational theories previously used for such research were

subverted. According to Yosso (2006), Critical Race Theory, or CRT, has been used by many researchers (Horsford, 2010; Iverson, 2007; G. R. López, 2003; Solorzano & Yosso, 2002) to explain the marginalization of English learners with great success. Other experts in the field of equity in education have combined these theories with others to explain the educational oppression of non-English speakers. The branch of CRT which specifically focuses on evidence of Chicana/o and Latina/o communities searching for a framework that addresses racism and its accompanying oppressions beyond the Black/White binary is LatCrit (Matamanadzo et al., 2016; Solórzano & Bernal, 2001; Yosso, 2005). LatCrit theory was included in the coding as a socially just practice and was explicitly included in the analyses of qualitative data to engender the focus on Spanish-speaking students. Application of LatCrit in this study expanded its potential to embrace the tenets of institutionalized racism which is present in schools and continually marginalizes ELLs across the United States.

Summary

This study attempted to expose the potential for improvement in terms of the way English language learners experience education in our public schools. The undeniable growth and diversity of the increasing population of Spanish-speaking LEPs allowed this study to embrace the framework of social justice LatCrit theory which are at the forefront of educational research for language minority students. Eight schools within three districts participated in this study, each representing a single case study, and cross-case study analyses were conducted upon completion of the data collection. The mixed methods design, which sequentially organized the qualitative and quantitative data, illuminated complex and rich sets of data regarding instructional practices being used to promote academic success for Spanish-speaking English language learners in North Carolina public schools. Careful

construction of the research design, purposive sampling of its participants, and case study cross-analysis were done in an attempt to render this study invaluable to the educational community in North Carolina. After reviewing the data of successful programs incorporating TWI dual language methods, this study successfully discovered explicit strategies and methodologies for creating equitable and excellent education for Spanish-speaking English language learners in the state. The implications that this study and others like it can have on pedagogy and practice may be critical in the development of more fair and equitable practices for every ELL student enrolled in public schools across the United States.

Chapter 4

RESULTS

Introduction

This study was an exploration of North Carolina schools with dual language two-way immersion (TWI) programs. Three of the districts identified by Thomas and Collier (2011) as promoting academic success for their English language learners (ELLs) agreed to participate in this research on best practices for dual language instruction. This study focused on specific strategies and pedagogies applied in the TWI schools, how these strategies were implemented, and why they were evaluated as effective by their practitioners. Summative assessment scores were then collected to further evaluate proficiency in literacy for native Spanish-speaking students who were identified as limited English proficient (LEP) by the state of North Carolina. The study was driven by the primary research question: How do these established TWI programs currently employed in NC promote the literacy proficiency of Spanish-speaking LEPs? In order to ascertain methods that are held in the highest regard by the administrators and teachers within the programs, it is important to understand the perceptions of practitioners regarding their thoughts on why students are having success in literacy. Many different factors were identified in the evaluation of these TWI programs and the effectiveness of their instruction. These included formative, evaluative, observational, and summative assessment datasets, which were identified as a primary means to measure student success. Other factors drove practitioners' beliefs regarding the effectiveness of their

programs and the benefits students experienced from inclusion in TWI classrooms, including various other academic benefits, district environmental enrichment, and sociocultural benefits. Specific strategies stood out as the most effective in schools where student performance was the highest, where four out of the six identified best practices for dual language instruction in literacy (see Table 2.4) were being used successfully to promote SSLEP academic success in literacy, along with two strategies which emerged in this study also showing a strong positive relationship to student success.

Eleven schools within five districts across North Carolina that employed TWI dual language programs with the focus of promoting academic success for Spanish-speaking students were invited to participate in this study. All districts were currently in at least their fifth year of operation with two or more schools per district using the same program model. Most of the schools had success in teaching literacy to their LEP populations by having proficiency above the state average on reading EOGs (see Appendix C), and according to study findings from Thomas and Collier (2011). An effort to mimic the results found during the filtering process was attempted but testing information available to the general public on student scores was not enough to confirm or refute these claims without getting permission from individual districts to access this information. Of the districts invited, three agreed to be a part of the study and two declined; this eliminated four schools and left eight schools as participants in this research. It is noteworthy that most of these schools were established in areas where the student population demographic provided enough native Spanish speakers to balance the needs of two-way immersion. Another demographic of the Spanish-speaking population which also posed a challenge to student educational success is the identification of low socioeconomic status (SES). This variable was not controlled for in this study since

over 76% of Hispanic LEPs in the state of North Carolina participate in the free or reduced lunch program, automatically including them in the low SES subgroup. As was noted in one teacher's response regarding the challenges of maintaining the TWI program, ". . . being a non-English speaking student and a low SES student is twice the challenge for kids." Being part of the LEP and the low SES subgroups can create duplicitous causes for students' lack of success in any educational program.

A mixed methods, sequential research model was used in this study for several reasons: first, to identify the qualitative factors attributed to TWI programmatic success for Spanish-speaking LEPs; second, to confirm the original analysis of data found in the literature which was used to filter the TWI schools in this study where LEP student performance was above the state average; and third, to establish a relationship between the qualitative and quantitative measures of programmatic success in order to extract specific strategies and practices which can promote the use of dual language to promote academic success for Spanish-speaking students in North Carolina. The focus of this study was placed primarily on the qualitative responses of education professionals during Phase I to ascertain what those involved in operating these programs believed to be the reasons for their success. Quantifiable data were also collected during this phase through ranking of strategies being used and the completion of a teacher questionnaire. In Phase II, quantitative data were collected from the eight schools, including End-of-Grade reading and ACCESS assessments which were analyzed to determine its relationship with the qualitative findings through comparison or integration. Analyses during these two phases were conducted under a transformative lens to identify practices that were socially just and LatCrit sensitive practices for native Spanish-speaking students in North Carolina public schools.

The initial phase of data collection focused on the perceptions of practitioners working in these eight schools, which are members of three different North Carolina public school districts. Through the process of in-depth qualitative interviews of district-based program coordinators and site-based program administrators, information regarding their dual language two-way immersion pedagogy and the success measures of their practice were discussed (see Appendix A). This became the framework for developing a teacher questionnaire to collect further qualitative data (see Appendix H). TWI classroom teachers from the participating schools were then invited to share feedback using a Qualtrics questionnaire, which combined text-based qualitative responses and quantifiable responses from multiple choice and single response questions. The qualitative findings included in this phase of the study comprised the most depth into answering the primary research question. The perspectives of practitioners in the study were analyzed to answer the following secondary research questions which emerged from the interviews: (a) “What specific strategies being employed are associated with the greatest success within the TWI programs for Spanish-speaking LEPs?”; (b) “How do TWI classroom teachers describe and rate the most successful strategies promoting student proficiency in literacy in their classrooms?”; and (c) “Is there consistency across different programs to validate these findings?”

The final data collection was completed during Phase II of this study, which accumulated test scores from students enrolled in these programs. It was critical for the analyses that all students who were ever identified as LEP were included. Some of the students had exited from LEP during their tenure in the TWI programs, and some after transitioning into middle school, but they began their educational careers as English learners not proficient in academic English. This study used all former and current LEP scores, as

failing to do so would eliminate those students who had the greatest progress towards becoming proficient through the TWI programs. A filter was also applied which eliminated all LEP students who had less than 3 years of enrollment in the dual language programs for two reasons: All LEP students who were new to public schools in North Carolina through the 2016-17 school year were exempt from their first year of testing in reading; and measuring success for LEP students in TWI programs compared to LEP students in traditional classrooms was not done until these students had 3 years of school completed, allowing for the difference in instruction to potentially impact their assessment outcomes. For 3rd through 8th grade students, the primary quantitative measure used was the End-of-Grade reading test scores for 3 years from 2015-2017. Further analysis was conducted for 2nd through 8th graders by examining student exit rates from their LEP status on annual ACCESS test scores. These measures were also used to answer the primary and secondary research questions. It is important to note that some of the assessment data sets collected were incomplete, and thus may inadequately represent the findings. All three districts provided data which allowed the separation of Spanish-speaking LEPs in TWI from those not enrolled in TWI, but one district did not have this information for one year of testing for these specific groups. Only two of the three districts had ACCESS exit rates for all LEP students. The data that were collected, however, represents an important part of the study, assigning a difference in assessment scores and averages between the two groups of Spanish-speaking LEPs.

Interviews of 21 program coordinators and administrators were conducted, and 59.8% of the teacher questionnaires were completed by 70 of the 117 teachers invited to participate in the study. Demographic information on participant experience working in the TWI programs is depicted in Figure 4.1. Nine teachers invited to participate were in their first year

of teaching, so their data were eliminated leaving 61 TWI teachers to share their experiences. The respondents who were program coordinators and administrators were more seasoned in dual language and TWI than were the teachers. Almost 50% of administrators had greater than 6 years of experience in DL programs, with the average number of years working in the TWI programs being $M=6.76$, and a SD of 4.46. Conversely, more than half of the teachers had 3 years or less classroom time, with the average years teaching in TWI being $M=4.16$ and $SD=2.94$. The grade levels taught by teachers ranged from pre-k through 8th grade, and in all eight schools the grades they taught were adjusted annually with about half of the teachers teaching Spanish language classes and the other half teaching in English. During the study, 59% ($n=37$) were teaching in the primary grades, pre-k through second grade, 39% ($n=25$) were teaching in 3rd through 5th grade, and one participant was teaching in middle school.

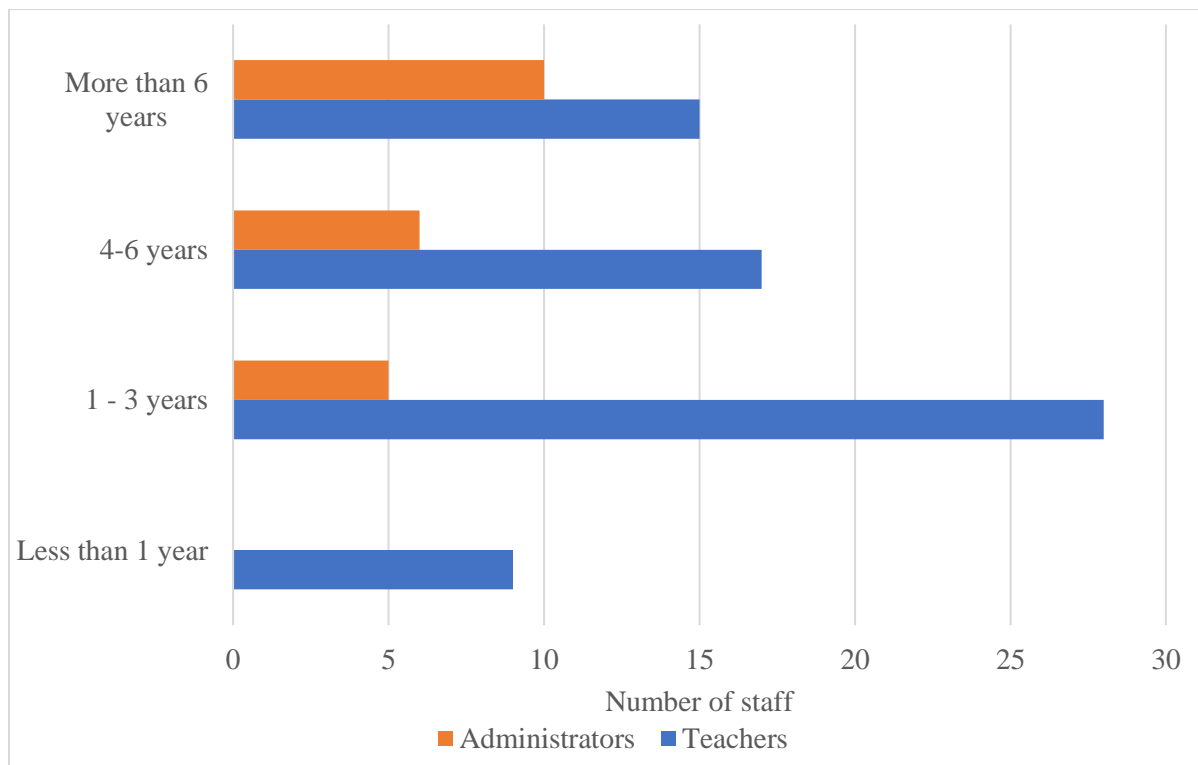


Figure 4.1. Time spent working in dual language by study participants.

Inquiry was also made regarding the percentage of the school day that was being taught in Spanish and English. Program administrators and coordinators all reported that their TWI model ideally targeted Spanish and English instruction to be split evenly. Teacher questionnaire responses regarding the percentage of the day taught in Spanish reported a mean of $M=54.8\%$ with a $SD=15.61$, and the percentage of the day taught in English mean was $M=45.52\%$ with a $SD=17.19$. The distribution of instruction by content area, as reported from the teacher questionnaire, is shown in Figure 4.2.

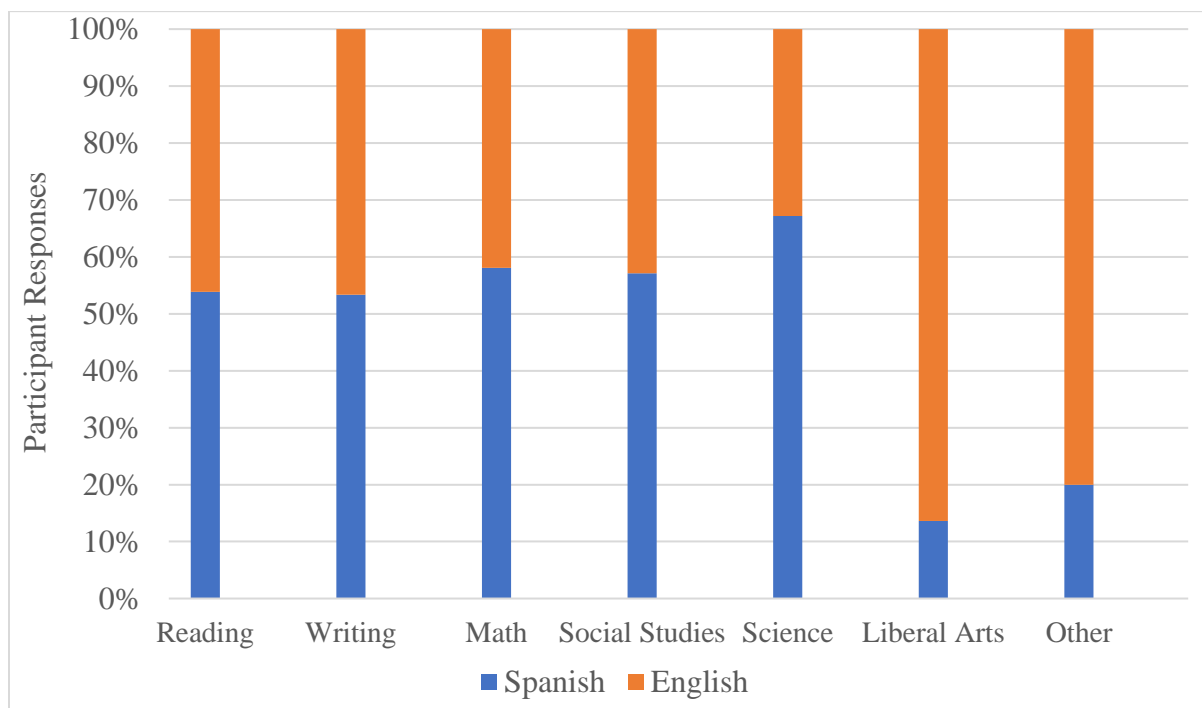


Figure 4.2. Language of instruction by subject in Spanish and in English.

There was consistency in instructional delivery reported in reading and writing, with math and social studies being instructed closer to 60% of the time in Spanish and science being taught 67% of the time in Spanish. Most teacher participants reported that a large majority of liberal arts and other classes were being taught primarily in English. All districts noted that the school-within-a-school model, where groups of students are enrolled in either

TWI or traditional classes, typically teach liberal arts classes such as art, music, and physical education in English. This may not have been the case if the school was a language-based magnet school and the entire student population was in a TWI program. One district in the study created an allocation map of subjects to be taught at all of their TWI schools, with specific grades identified for core content areas. The other districts used school-specific plans for distributing the language of instruction based upon the dual language immersion model and student demographics.

Another factor considered when evaluating school programs was that rarely do two programs or classrooms look alike. The most common TWI dual language program models found in current literature (see Table 4.1) are also the ones that were described by district personnel in the study as being used in their schools. These included 50-50 constant immersion, in which both languages are taught with equal instructional time for all grades; 80-20 gradual release, where Spanish literacy is primarily taught in pre-K and kindergarten with a gradual increase into English literacy instruction in first through third grade and evolving into a 50-50 constant immersion model; and 90-10 gradual immersion, where 90% of the day students receive instruction in Spanish, and literacy only is taught in Spanish from kindergarten through 2nd grade with English literacy instruction beginning in 3rd grade. According to study participants, 61% ($n=50$) reported using the 50-50 model, focusing on teaching in Spanish and English equally, approximately one-fourth of the participants ($n=21$) reported beginning with an 80-20 model in early primary grades and evolving into a 50-50 model by second or third grade (see Figure 4.3). Also noted was that some district personnel reported the use of one model type, yet teachers may have reported the model differently, so all participant responses were included.

Table 4.1

TWI Program Models in North Carolina

Title	Type	Descriptors
50-50	Constant Immersion or Simultaneous Biliteracy	<ul style="list-style-type: none"> • All grades using same model • Instruction in core content areas split equally between the two languages of instruction • Ideally 50% of students are native Spanish (L1) speakers and 50% are native English (L2) speakers
80-20	Gradual Immersion or Gradual Release	<ul style="list-style-type: none"> • Pre-K and Kindergarten begin in 80-20 • Instruction delivered 80% in Spanish (L1) and 20% in English (L2) • Language of instruction as needed into 1st and 2nd grade with gradual release of instruction in L1 and more in L2 • Evolves into a 50-50 model by 3rd grade, instruction delivered equally in L1 and L2 • Possibly more L1 speakers than L2
90-10	Gradual Immersion or Sequential Biliteracy	<ul style="list-style-type: none"> • Pre-K through 2nd grade instruction primarily delivered in Spanish language (L1) • Focus on developing heritage language literacy • Introduction of English literacy in 3rd grade • Evolves to 50-50 constant immersion in 4th & 5th grade • Usually higher percentage of L1 speakers

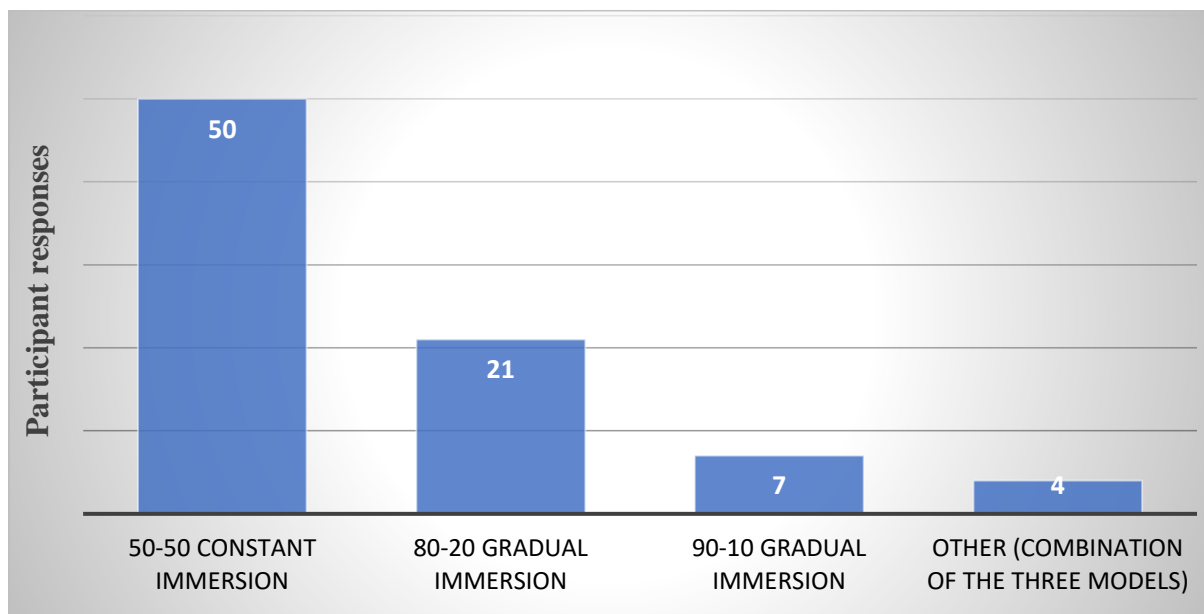


Figure 4.3. Dual language models being used in the study.

It was evident in the interviews and through feedback from the teacher questionnaire that the district adopted the model to be used, but it was also noted from every interview participant that the composition of students at individual schools often dictated which model was used at the onset of each school year, adjusting to the changing demographics and interest in the program. How quickly the immersion model evolved was then based upon student success in literacy, regardless of whether instruction was initially delivered in Spanish or both English and Spanish. Variations of these models were used in participating schools, and theoretical bases were applied during the adoption of the chosen model. All three districts reported that the use of current research in the field of dual language education and an established network of DL educators in the state of North Carolina were used reflectively in guiding the decisions made in program model adoption and change. Program dynamics across the schools varied by length of time in operation, district involvement and support, and how long the team members had been there. The average years in operation across the three districts in the study was 12 years, and at the school level, program operation averaged 8.5 years, with a $SD=3.5$ and a range of 8 years. Two of schools were in their fifth year of operation, one in its sixth, two in their seventh, one in its 12th, and the oldest programs were in their 15th year of operation.

Results: Qualitative and Quantitative

To assess the effectiveness of promoting literacy proficiency for Spanish-speaking ELL students in the eight participating schools, interview participants were questioned about their program, its strategies and practices, the consistency of program delivery across the grades and schools, and what measures of success for students in the program informed them of its use in their schools. The qualitative “stories” shared by practitioners uncovered through

interviews and the teacher questionnaire are reported initially to focus on “how” and “why” these programs are working to promote student academic success in literacy. These results provided the three most effective strategies to use I TWI which concurred with the research along with two additional strategies not found in the literature. Also resulting from this study was the notion that failure to apply these practices may explain the lower performance of one district in the study.

These results were completed with a guarantee of anonymity for all participants, so they are presented only by alpha-coded districts throughout the study. A report of relevant quantitative data collected follows the qualitative analysis in each finding where applicable, and then comparisons or integrations to the qualitative findings are identified. Finally, quantitative assessment data are reported in charts and graphs at the end of this chapter to address both the primary and secondary research questions. The data collected during the qualitative phase was synopsized in two ways, according to the structural model in *AtlasTi* (coding rubric) and a meta-synthesis of qualitative findings. Thematic analyses of the coding rubric connected the data to domains of this mixed-methods study established in the research model, which included measures of student success, instructional strategies, staff development for DL teachers, teacher perspectives regarding problems with implementation of a DL program, and assessment data (see Chapter 3, Figure 3.2). The findings, both individual and shared administrative perspectives regarding TWI programs in the participating schools, are followed by results from the teacher questionnaire. Upon completion of reporting these findings, challenges and/or supports to the literature, relationships to the conceptual framework, and further discussion of the findings are identified in the summary chapter.

Measures of Student Success

There were several significant findings regarding how districts and schools measured student success in the TWI programs. Participants of this study are employed in a profession where testing and assessment have become the foundations of educational institutions across the country, so the inclination to turn to test results as a gauge for how much success students are experiencing is explicit to their positions in these districts and schools. One school program coordinator stated, “I know that our dual language program is working because we always outscore the district on EOGs, district unit assessments, and end-of-year assessments.” Student success can be broken down much further, however, to identify not only proficiency scores on assessments but other academic and sociocultural benefits which can enhance students’ experiences in school.

The results of the study yielded many findings in support of a positive relationships between SSLEPs academic success and enrollment within the TWI programs (see Table 4.2). Assessments used to measure student proficiency were administered in English and Spanish at all schools, and participants reported these scores as showing consistent growth for TWI students which surpassed their LEP peers not enrolled in the TWI programs. Also including in the findings were additional academic, environmental, sociocultural, and district benefits, which showed strong support for the development of equitable, LatCrit sensitive, and a socially just education for members of the Hispanic learning community. Specific pedagogy and strategies used to develop and maintain dual language programs, and assessments scores which showed concurrence with data found in the literature review, reaffirm the notion that students who are enrolled within these programs also experience above average standardized assessments scores on which they consistently outperform their peers.

Table 4.2

Study Findings

1: Assessments used to measure student success
<ul style="list-style-type: none"> ▪ All districts created their own assessments for Spanish literacy proficiency ▪ Students' growth trajectory was a key factor in TWI program evaluation ▪ Assessment scores showed consistent growth for TWI students
2: Additional academic benefits
<ul style="list-style-type: none"> ▪ Students exhibited higher cognitive processing skills ▪ The DL programs built strong collaboration skills in students ▪ Students were highly engaged in learning in TWI classrooms
3: District environmental benefits
<ul style="list-style-type: none"> ▪ A district-driven mission and vision resulted in increased collaboration ▪ Leadership at the school level provided an environment for success ▪ The collaborative and risk-taking atmosphere promoted community support
4: Sociocultural benefits
<ul style="list-style-type: none"> ▪ Students developed social habits with both English and Spanish peers ▪ Multicultural awareness and respect was predominant in the TWI schools ▪ 96% of teachers rated sociocultural benefits as the highest measure of success
5: Vocabulary development
<ul style="list-style-type: none"> ▪ Rated as the most highly valued strategy by study participants ▪ Reported as an effective strategy, yet posed a challenge in practice ▪ All districts advocated for developing emergent 'oracy' strategy in TWI
6: Content-based instruction
<ul style="list-style-type: none"> ▪ Highly rated strategy by practitioners across all eight schools ▪ Integrated curriculum and language standards; used bridging to support content learning in L2 ▪ Limitation of available resources in target language to support content learning
7: Dual literacy instruction
<ul style="list-style-type: none"> ▪ Ratings of effectiveness for strategy were moderate across all districts ▪ Teachers rated effectiveness lower than administrators ▪ Teacher experience and staffing issues impacted delivery of the strategy
8: Small group literacy instruction
<ul style="list-style-type: none"> ▪ The majority of participants highly valued small group practices ▪ Group construction varied greatly across participating schools ▪ Language not typically the focus of groups, yet Spanish speakers gained a voice
9: Heterogeneous collaboration
<ul style="list-style-type: none"> ▪ One of the lowest rated and least used strategies across all TWI schools ▪ TWI models supported heterogeneity, but rarely group explicitly by language ▪ No supportive comments for use as an instructional strategy reported
10: Dual Language Professional development
<ul style="list-style-type: none"> ▪ Varied greatly across the three districts ▪ Highly valued by all study participants ▪ Majority of DL teacher development done through coaching
11: End-of-Grade reading scores
<ul style="list-style-type: none"> ▪ The majority of SSLEPs in TWI outperformed their peers in traditional classrooms ▪ Scores fluctuated across schools, grade levels, and districts ▪ Literacy proficiency was significantly improved in two of the three districts
12: LEP exit rates
<ul style="list-style-type: none"> ▪ Some LEP exit rates were higher for SSLEPs in DL than their peers not in DL ▪ One district showed percentages of these comparison which were statistically significant

Finding 1: Assessments used to determine student success. There were many types of assessments used to measure success in literacy, and all of these were used to determine the amount of information students were able to retain and use in reading, writing, speaking, and listening from the instruction received during their education. Qualitative results from this study were broken into two categories: types of assessments and assessment data analyses which are used by the participating schools in this study to determine student success. Quantitative findings, which are illuminated in greater detail in Findings 11 and 12, show that with little exception, Spanish-speaking LEP students who participated in the TWI dual language programs for at least 3 years outperformed their LEP peers in performance on standardized annual reading assessments. Three common themes emerged:

1. All districts created their own assessments for Spanish literacy proficiency.
2. Student growth trajectory is a key factor in TWI program evaluation.
3. Literacy assessment scores show higher performance for TWI students.

Qualitative. Many responses were guided by the use of assessments to evaluate how well students were learning required grade-level standards for literacy proficiency (see Table 4.3). These varied by district, yet there was some overlap of common testing tools being used in North Carolina. All three districts used the state mandated testing which are conducted only in English. Other means of assessing student literacy skills identified by participants included a variety of tests to assess reading proficiency in Spanish such as ACTFL, MClass, IDEL, SPSS, or other district-adopted formats. Both District A and C reported that they have discontinued the use of the Spanish version of DIBELS TRC and replaced it with the mCLASS IDEL format. Also noted by all three districts was the creation of their own assessments in Spanish, which were given at the end of units of study and throughout the

year. Most interview participants concluded with the final measure of students' success being a benchmark test in North Carolina called the End-of-Grade (EOG) reading assessments, which are given in English. Data analysis of assessments given throughout the year to measure student success in literacy was a common response in a large majority of participants, with 90.47% of interviewees ($n=19$) and 85.25% of teachers ($n=52$) stating it was a primary measure of student success.

Table 4.3

Assessments Used to Measure Student Success in TWI Programs

Spanish Literacy	District A	District B	District C
ACTFL	✓		
DELE	✓		
DIST	✓	✓	✓
ESCRITO		✓	
KEA		✓	
mCLASS:IDEL	✓	✓	✓
mCLASS: DIBELS	✓	✓	
RRs			✓
SOPA			✓
SSLP	✓		
STAAR	✓		
STAMP		✓	
English Literacy			
ACCESS Test	✓	✓	✓
NC Rd EOG	✓	✓	✓
mCLASS: DIBELS		✓	✓
mCLASS: TRC			✓
WIDA		✓	

Note. ACCESS=Assessing comprehension and communication in English state-to-state; ACTFL=American Council on the Teaching of Foreign language; DELE=Diplomas for passing a standardized test of European Spanish proficiency (Instituto Cervantes); DIBELS=Dynamic Indicator of Basic Early Literacy Skills (English); DIST=District-created assessments of Spanish language proficiency; ESCRITO=A Foundations® program for comprehensive reading, spelling, and handwriting in Spanish; IDEL=Dynamics Indicators of Basic Early Literacy Skills (Spanish); KEA=Kindergarten Entry Assessment; mCLASS:Reading 3D=Universal screeners of reading skills for K-5th-grade students; NC Rd EOG=North Carolina Reading End-of-Grade for 3rd-8th-grade students; RRs=Running Records are a formative assessment of oral reading skills; SOPA=Student Oral Proficiency Assessment; SSLP=Stanford Spanish Language Proficiency; STAAR=State of Texas Assessment of Academic Readiness; STAMP=Standards-based measure of language proficiency in reading, writing, listening, and speaking; TRC=Text Reading Comprehension; WIDA=World-class Instructional Design and Assessment.

Individual students' growth trajectory was noted as important to analyze, and all three districts had begun to realize that this was a key factor to consider when evaluating their TWI programs. Several administrators noted in their interviews that test scores do not really illustrate the best picture of student success. One principal stated,

Success doesn't look the same in dual language as it does in traditional classes. DL students do not typically perform at high levels on EOGs in third grade but show steady growth, eventually surpassing even their English-speaking peers who aren't in DL.

Improvement in academic achievement based on assessment scores of Hispanic LEPs in TWI was noted in all three district-level interviews, and one program coordinator stated, "... there is a positive difference in test scores for Spanish-speaking LEPs enrolled in TWI versus those enrolled in traditional classrooms." Teachers also noted that test scores are more difficult to interpret when measuring student success. One teacher's comment on the questionnaire was, "Sometimes elementary parents and teachers are discouraged by their results but, in the long term, the performance results are amazing!" As student progressed to higher grades, there was evidence to suggest that the growth trajectory became more pronounced. A district representative stated that their DL students were outperforming other LEPs and non-LEPs in middle school, and a DL coach talked about their students enrolled in middle school saying, "Most of our DL students are either identified as AIG or are in advanced classes." Further support for improved reading scores was expressed during the qualitative data collection:

The DL schools consistently out-rank the district in test scores.

Our quarterly data goals show that the DL students outperform even their English-speaking peers on the Reading EOG by fifth grade.

Improvement in academic achievement was noted for Latino LEPs in the dual language schools.

Quantitative. The last 3 years of NC Reading EOG tests were collected from each school from 2015 to 2017, and comparisons across the two groups of students were made. The reading scores across two of the three districts showed statistical significance favoring SSLEPs enrolled in the TWI programs (see Table 4.4).

Table 4.4

Descriptive Statistics for EOG Reading Scores for SSLEPs

District/Statistic	2015		2016		2017	
	DL	NDL	DL	NDL	DL	NDL
District A						
<i>Mean</i>	1.98	1.34	3.06	1.30	1.75	1.30
<i>Number</i>	124	148	18	103	100	92
<i>Standard Deviation</i>	1.085	0.696	1.162	0.739	1.019	0.691
<i>Mean difference</i>	-0.638		-1.755		-0.446	
<i>Significance test</i>	0.000	Yes	0.000	Yes	0.000	Yes
District B						
<i>Mean</i>	1.92	1.62	2.12	1.68	2.22	2.29
<i>Number</i>	132	31	176	25	88	47
<i>Standard Deviation</i>	1.003	0.741	1.081	0.945	1.087	1.104
<i>Mean difference</i>	-0.304		-0.438		0.073	
<i>Significance test</i>	0.009	Yes	0.000	Yes	0.067	No
District C						
<i>Mean</i>	1.33	1.79	1.34	1.87	1.54	1.82
<i>Number</i>	21	112	29	120	78	106
<i>Standard Deviation</i>	0.577	1.035	0.721	1.223	0.878	1.169
<i>Mean difference</i>	0.452		0.522		0.282	
<i>Significance test</i>	0.012	Yes	0.000	Yes	0.000	Yes

Isolating SSLEPs enrolled in only the eight schools included in this study allowed for an analysis of SSLEP student average scores on reading EOGs both in the TWI programs and in traditional classrooms. Eliminated from the analysis were LEP students who had been enrolled in the TWI program for less than 3 years and those who spoke another primary

language. Districts A and B showed at or above reading EOG scores for SSLEPs in DL over their non-DL (NDL) peers with statistical significance³ of $p < 0.05$, while District C showed statistical significance for NDL scores over their DL peers, with the SSLEP students in the TWI classrooms scoring lower averages and less proficiency overall (see Figure 4.4).

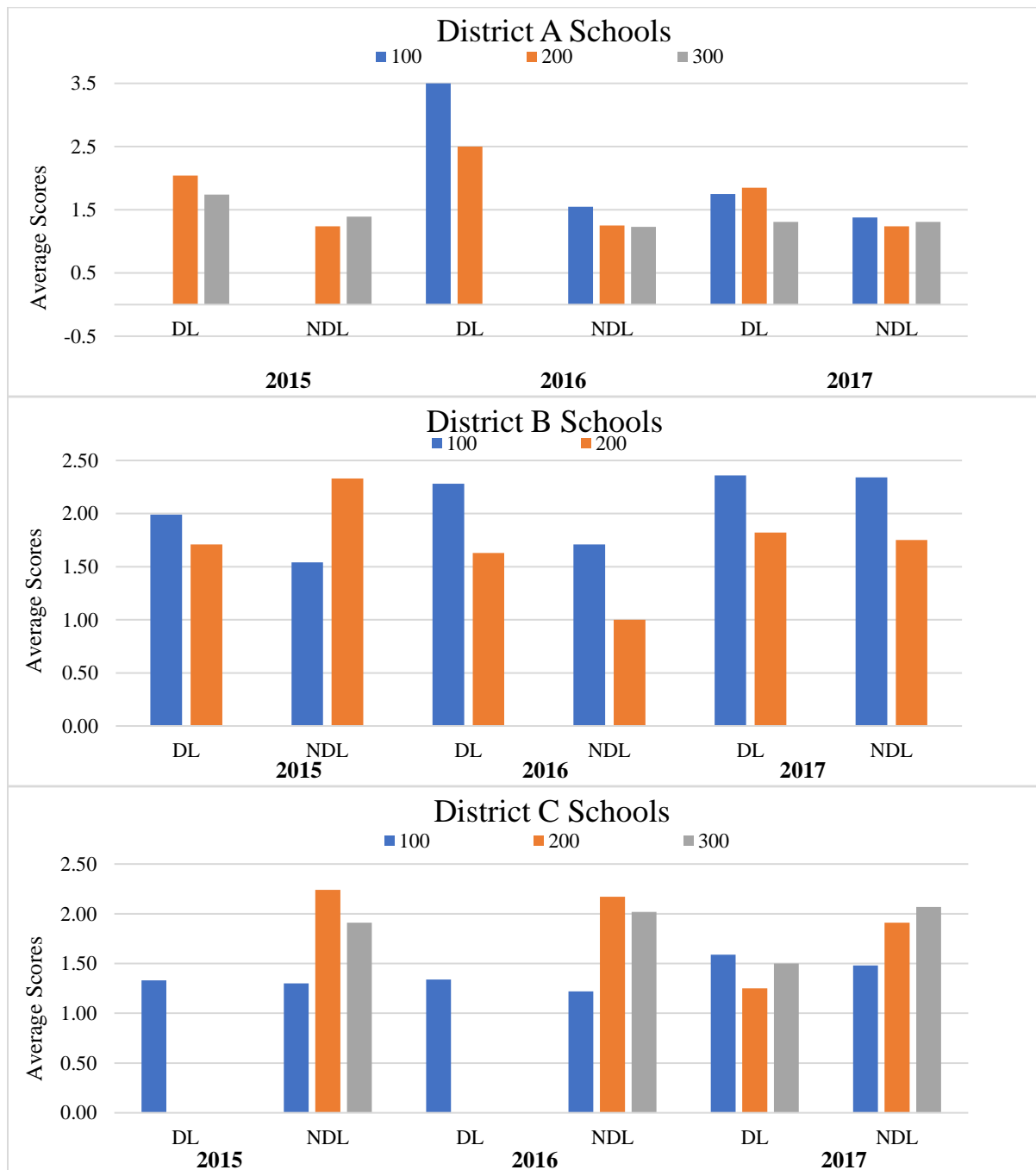


Figure 4.4. Average EOG reading scores for SSLEPs for all districts by school.

Comparison or integration. One of the original criteria for filtering the districts included in this study was that of a 3-year study conducted by Thomas and Collier (2009, 2010, 2011) in North Carolina, which identified consistently higher scores on reading EOGs for LEP students in these dual language programs. These test scores were re-evaluated in this study to see if LEP student performance remained higher than the state average through 2017. Much of the data integrated well with their literature reporting DL student academic performance which surpasses their peers not enrolled in DL and confirmed their analysis that reading scores do not typically show at or above average scores until fifth grade. In most grades for the schools in District C, reading scores for students enrolled in their TWI programs were not improved, with all 3 years showing scores of DL SSLEPs being below their NDL peers enrolled in traditional classrooms in the same schools (see Figure 4.4). While scores from several schools in this study refuted the conclusion of improved reading proficiency for their DL students, a majority of the schools and districts did confirm their findings. The comparison of TWI dual language LEP students and traditional classroom LEP students positively answers a secondary research question to show that TWI programs do promote literacy proficiency for Spanish-speaking ELLs.

Finding 2: Additional academic benefits for students. Many additional benefits were noted for students who participated in the TWI programs. Qualitative findings were the primary substantive means to support these findings, and there were no direct correlations with the literacy assessments analyzed, although SSLEPs in TWI outperforming their peers not in TWI offers a potential insight into the validity of these claims. Interviews revealed benefits such as higher cognitive performance, greater collaboration skills, higher levels of student engagement in the classroom, and fewer problems with student discipline. Some

questionnaire data from teachers also supported these findings. Three common themes emerged from this finding:

1. Students exhibit higher cognitive processing skills.
2. The dual language programs build strong collaboration skills in students.
3. Students are typically more engaged in learning in TWI classrooms.

Qualitative. District level personnel noted many other benefits experienced by their TWI students, and teachers elaborated more on anecdotal assessments taken through observation of student engagement, participation, and willingness to embrace both Spanish and English instruction during lessons. All practitioners working within the participating TWI programs agreed that there is so much more than just looking at test scores to measure student success. “Dual language asks more of the students—to process academic content in two languages and then translate it back again,” stated a principal at a TWI elementary school. “This causes them to perform at higher critical thinking levels.” Agreement regarding brain development being much greater in TWI was noted in 7 of the 21 interviews. “The synapses that occur at early ages creates students with much higher cognitive processing capabilities,” stated a district program coordinator. And according to one TWI curriculum coach, “. . . the brain is working differently, and having the flexibility to play around with something in your mind is really powerful!” Not only is it seen as an academic benefit, but as a life skill. One principal commented on the biliteracy model at their school being explicitly planned for and taught making it like a “. . . buy one, get one free deal for the students, where they end up able to communicate effectively in two languages!”

Another benefit identified to measure student success was in the development of collaborative learning models across all the TWI programs. One district coordinator talked

about how they see staff from different schools coming together to collaborate as teacher teams, and that it was also reflected in classrooms with the students. A school-level program coordinator in the same district affirmed that the TWI classrooms build strong collaborative environments sharing their different language expertise, while another district boasted that through collaboration, TWI had closed the achievement gap between LEPs and non-LEPs. The third district added to this body of information by sharing that “Our TWI students, both Spanish-speaking and English-speaking, evolve through the program as more complex thinkers who have multiple views of the world around them.” Several districts also noted that TWI student performance consistently exceeded traditional classroom student performance in many areas, bolstered by high-order thinking skills which were fostered in their classrooms. According to many school-level participants, these measures could be seen when you walked into a TWI classroom.

Even though I don’t speak or understand Spanish, when I conduct a classroom observation in any of my DL classrooms, it is evident by the high levels of student engagement that there is critical thinking, rigorous discussion, and problem solving going on in the lesson,

said one of the more seasoned TWI school administrators in the study. In the teacher questionnaire there was room for additional information teachers wished to share, and one teacher stated, “This program works. It gives a voice to students that are normally outcasts in other schools.” Other responses from study participants supported this finding by answering a question about how to determine student success of students in mastering literacy in their TWI classrooms included:

Success in the TWI classroom is determined when students come to class with happy faces, always smiling and ready to learn and help others learn . . .

Students are engaged in their learning and want to collaborate with one another. Students are able to process information better with the privilege of dual language instruction.

They show enough confidence to show others what they have learned.

The DL students feel safe enough to take risks.

Quantitative. The two districts who had strong support for their programs and explicit vision and mission statements outperformed the third district on overall performance of their SSLEPs enrolled in TWI on the Reading End-of-Grade tests in 2015, 2016, and 2017. These data, which show a positive relationship between the TWI program and SSLEP scores on the Reading EOG, can be integrated with qualitative findings in support of the notion that there are additional benefits to participation in the TWI for SSLEP students that go beyond reading assessment scores. ACCESS test scores were also collected to review the exit rates of the SSLEP students and showed that those in DL classrooms had significantly higher exit rates than SSLEPs not enrolled in DL.

Comparison or integration. This finding can be integrated to show that there are reciprocal advantages to participation in the TWI programs. Skills exhibited by students in DL programs included using higher cognitive processing skills, being able to collaborate effectively with peers, and being more engaged in their education are evidenced by the EOG scores examined. The ACCESS test scores were also collected to review exit rates of the LEP students, and there was evidence in some schools that showed possible integration with the qualitative findings. The exit rates provided from two of the three districts showed increased exit rates for SSLEPs in TWI which were higher than their non-DL SSLEP peers.

Finding 3: Environmental benefits for students. With these districts becoming more invested in the dual language programs, some of the benefits that students experienced stemmed from the environments that have been developed in their communities. For those districts that had built these environments, collaboration had improved for teachers, students,

and parents; leadership had become a more supportive role for the community, and teachers were experiencing a more collegial atmosphere in the school from being engaged in the culture of biliteracy, which promoted students in embracing their education with more enthusiasm. Several common themes emerged:

1. DL programs with an explicit district mission and vision increased collaboration.
2. Leadership at the school level can provide an environment for success.
3. A Collaborative and risk-taking atmosphere promotes community support.

Qualitative. Different environments had been established at the district level as well as individual schools across this study. Interview and questionnaire data collected reported significant findings in this area affecting student success. Initial comments regarding district mission statements were made by one district DL coordinator that, “As a district, the dual language program needs to have a separate and unique vision and mission to support the schools that have TWI programs and create unified goals for all DL schools.” All three districts reported that their district vision and mission statements reflect the goal of creating bilingual, biliterate, and bicultural students with 21st-century skills. While not every district had a separate vision and mission for its DL schools, the support of its mission was embedded within the overall district statements. The two districts in which the DL mission was explicitly stated provided a strong statement of support that all DL schools were very collaborative across the district. All principals in these districts reported that the district had really begun to support them through district-organized professional development for DL staff, the organization of meetings for DL teachers, and cross-district collaborative professional learning communities (PLCs) where teachers in the same grades met to plan and evaluate their programs. One of these districts had implemented teacher education from

program coordinators and coaches focused specifically on dual language practice, which was conducted at district-level meetings for teachers to develop the pedagogical approaches they had adopted. Additional DL professional development offered was centered on curriculum, data trends, and student and teacher needs. The third district which did not offer an explicit vision and mission or training for the DL programs resulted in teacher responses which reflected both a lack of professional development and support for their DL programs.

A second environmental benefit to the students was reported in the interviews and teacher questionnaire through comments regarding administrative leadership and support. “Leadership effects so many aspects of the DL programs, including teacher motivation, program consistency, parent buy-in and commitment to the program, and student success.” While support at the district level was reported as critical for program development, others voiced how important it was that school administrators were strong advocates for TWI. “The principal being fully invested in the process makes all the difference in the world,” stated one district program coordinator. Participants of the questionnaire were asked to select from whom they received the most coaching support on TWI practices in their classrooms. Of the 54 teachers who responded to this question, 31.48% ($n=17$) stated that their district program coordinators or school administrators provided the most coaching for them, and 52.63% ($n=30$) received the most support from their curriculum coaches. Over 35% of the coaching support (35.41%) was reported to be conducted after an observation of lessons in the classroom ($n=34$), while 26 respondents received coaching before lessons and 17 received coaching during lessons. Nineteen of the respondents (19.79%) reported to receive no coaching on their TWI instruction at all. While the results of these inquiries varied, there was evidence to suggest that only the districts with explicit support for its TWI programs were

promoting student success. Through their initiatives to build the program and align it across the schools to scaffold support for the TWI staff, greater benefits were realized.

A program coordinator from the third district, which did not have a separate vision and mission for its DL program, stated that there was a line in the general district vision and mission supporting bilingual and biliterate students, but it was not explicit. Initiatives for their TWI schools were not addressed at the district level, and there was no formally organized cross-district collaboration for the TWI staff. They also reported some difficulties with management of their dual language programs, saying that “program decisions are not made by the Superintendent or the Board. Basically, they ask us who are involved in the TWI programs to report on progress, and then they say, ‘If it’s working, let’s keep doing it.’” A curriculum coach from this district shared that DL teachers are invited to attend the exact same training as the traditional classroom teachers, and there was no district training specifically targeting learning the TWI instructional model. “Dual language teachers do translating of their curriculum instead of attending the district professional development,” according to another interview participant from the same district.

Support from central office can promote the environment created at the school level for the DL programs; however, the success within individual schools can be developed through leadership to provide an environment which supports the TWI program, its staff members, and its students. One district reported that of their TWI schools, some were successful and had strong DL leadership, and some had seen student success decline drastically under leadership that did not support the tenets of the DL program. An interviewee at one of those schools commented that over the past few years the new principal had been there, “Data is telling us that the DL program is not successful at our school.” Sixty

percent of interviews conducted in this district stated the need for leadership support, understanding, and knowledge of the TWI program in order to benefit the students enrolled: “The program is constantly changing . . . expectations are not clear school wide” said one teacher; another reported that, “Curriculum coaches are not properly trained or certified as TWI curriculum facilitators, and only a few workshops have been offered to some, not all TWI staff”; and a coach at one school stated, “We don’t fit into the district’s mold, so the district can rarely provide support for teachers and our [TWI] program.” Having a knowledge base at the leadership level is critical to support and grow strong DL programs. Another teacher from this district commented, “No one is TWI certified to properly coach staff.”

A district vision and mission can drive success from the top down to the students, but it must invest in the program to be effective. While not every school reported that their programs were experiencing great success in their TWI classrooms, most were eager to continue to improve. Further support of this finding was illustrated by comments from program administrators in the study:

The support that teachers receive from the district now is so much more. It has made all the difference in their ability to be effective in the TWI classroom!

My TWI teachers keep asking me to come and observe their lessons to see if I can assess if what they are doing this year is working. That’s a first!

Everyone in the DL program can respond non-defensively to critical inquiry of their teaching.

The district has fostered self-reflection as a practice, and I see the difference in conversations I overhear and have with my team.

They [teachers] are motivated to learn and improve.

Quantitative. There is a clear difference when analyzing the test data across the three different districts, with the two reporting strong district support having End-of-Grade reading

scores in TWI classrooms which surpassed those not enrolled in TWI classrooms. These districts also showed strong proficiency scores for SSLEPs in DL in which they consistently outperformed their Non-DL peers. The third district also had a few grades with scores that reflected this result, yet there were more data for District C that showed lower proficiency in the SSLEPs enrolled in DL versus those not in DL. Due to these results, there is support for the opinions shared by participants above regarding the lack of leadership affecting the scores and the TWI program not working as well as the other schools.

Comparison or integration. This finding helped to answer the research question regarding consistency across all programs. and the relationship with student success measures was clear. The notion that district and school environments have an impact on the success of students enrolled in TWI programs are rarely documented in the current literature on DL; however, there is strong support in the literature that professional development promotes positive learning environments which is a key strategy in promoting student success in dual language schools. The lack of quantitative data to support these findings makes it difficult to directly correlate with student success measures. There were also confounding data regarding the schools in the third district which may ultimately be affecting their outcomes, including one TWI school that lost its Inter-Baccalaureate program, and therefore lost the student demographic that is typically enrolled in that program, while another school with a TWI program gained this population. This may be a causal factor in the relative failure and success which the two schools showed in the data and may not directly correlate with the support from leadership and the development of a supportive community environment. The fact that two of the schools in this district were newer programs and had only third grade scores for one year was also a potential reason for the differing outcomes. A

final factor to consider is that there were also different demographics at play in the third district, where several of the TWI classrooms had few Spanish speaking students, thus resulting in very different dynamics than the typical TWI model, which pairs half native Spanish and half native English speakers in the classrooms.

Finding 4: Sociocultural benefits for students. During interviews, many participants reported that the greatest measure of student success was the sociocultural aspect which was promoted in the DL programs. As a result of this feedback, an evaluation of multicultural awareness was conducted in the teacher questionnaire, and the correlating quantitative findings are integrated below. Several themes emerged from this inquiry:

1. Students in TWI develop social habits with both English and Spanish peers.
2. Multicultural awareness and respect is predominant in TWI schools.
3. Ninety-six percent of teachers rated sociocultural benefits as the highest measure of student success.

Qualitative. A significant measure of success noted by most school administrators and teachers was the overarching understanding and acceptance of the multicultural environment which was developed in the schools through the dual language immersion programs. There was agreement across all eight schools that students enrolled in DL programs seem to self-integrate in social settings within the school, and several noted that students are comfortable with the differences in other students. When asked what the characteristics of success were at their school, one principal pointed to a picture on the wall of two boys hugging, one being Hispanic and the other White. A principal from another school commented, “Students are very respectful of differences in people.” One principal exclaimed passionately, “The greatest measure of success is to ensure that there is cultural

social justice in our school,” further stating that “It is just a beautiful program . . .” There was consensus across all eight schools that DL programs can be the best learning opportunity for ELLs if everyone in the school or district community buys into it. Evidence from this data collection showed many ways in which student success was being analyzed, and that decisions regarding the program structure were not just driven by test scores. What was clear was that the administrators and staff involved in implementing dual language programs strongly believed that the program fostered multicultural awareness and respect of people’s differences across the entire community. There were examples of sociocultural benefits of the program given by almost 90% of the interviews conducted and comments made from many teachers on the questionnaire regarding strong cultural responsiveness and culturally evolved students enrolled in the DL programs:

An international family night has emerged from having a dual language program at our school.

Students get the gift of having two languages to communicate.

The DL parents are risk-takers. They come here with big plans and work hard . . .

Students are getting involved in social activities and self-integrating.

Through the parent surveys we have found that there is great community buy-in of our dual language program.

Quantitative. The teacher questionnaire asked participants to rate the overall effectiveness of students learning multicultural values from being enrolled in the TWI program. Out of all the measures they were asked to rate that could be affected by the structure of the TWI program, this outcome value received the highest mean rating. Of the 52 participant responses, on a scale of 1 to 100, the minimum rating was 35 and the maximum rating given was 100, with a mean of $M=81.94$ and a standard deviation of $SD=16.25$.

Comparison or integration. While there were limited quantitative data to support this finding, it was clear from the feedback given by participants that the sociocultural benefits experienced by students in the program were relevant to the study. This finding directly addressed the issue of socially just and LatCrit sensitive practices being developed through the TWI programs, resulting in positively impacting the SSLEPs by these benefits and the entire community of families and extended stakeholders who experienced a positive impact through the promotion of multicultural awareness.

Instructional Strategies Used

After sharing insights on what instructional strategies were believed to be the most successful at improving Spanish ELL's academic proficiency in reading, interviewees were handed a strategy card which included the six strategies previously identified in the literature (see Appendix K). During district interviews, "other" strategies mentioned were then added to the corresponding site-based interviews and teacher questionnaires, resulting in the emergence of several previously unidentified strategies. How all the strategies were being applied in their schools was discussed, and participants were asked to rate the effectiveness of each strategy being used to promote academic proficiency in reading. The value assigned to these strategies was done so by giving three points to a rating of "highest" effectiveness in teaching literacy in the TWI program, two points to a rating of "moderate," and one point to any strategy rated as "lowest" effectiveness (see Figure 4.5; Appendix M). The TWI strategy ratings included responses for each named strategy along with ratings of other common strategies which emerged in the interviews. All of these strategies were discussed regarding "how" and "why" they were identified as cornerstones for their programs, and this has

resulted in several key findings of this study to answer the research question regarding the strategies most effective in TWI programs.

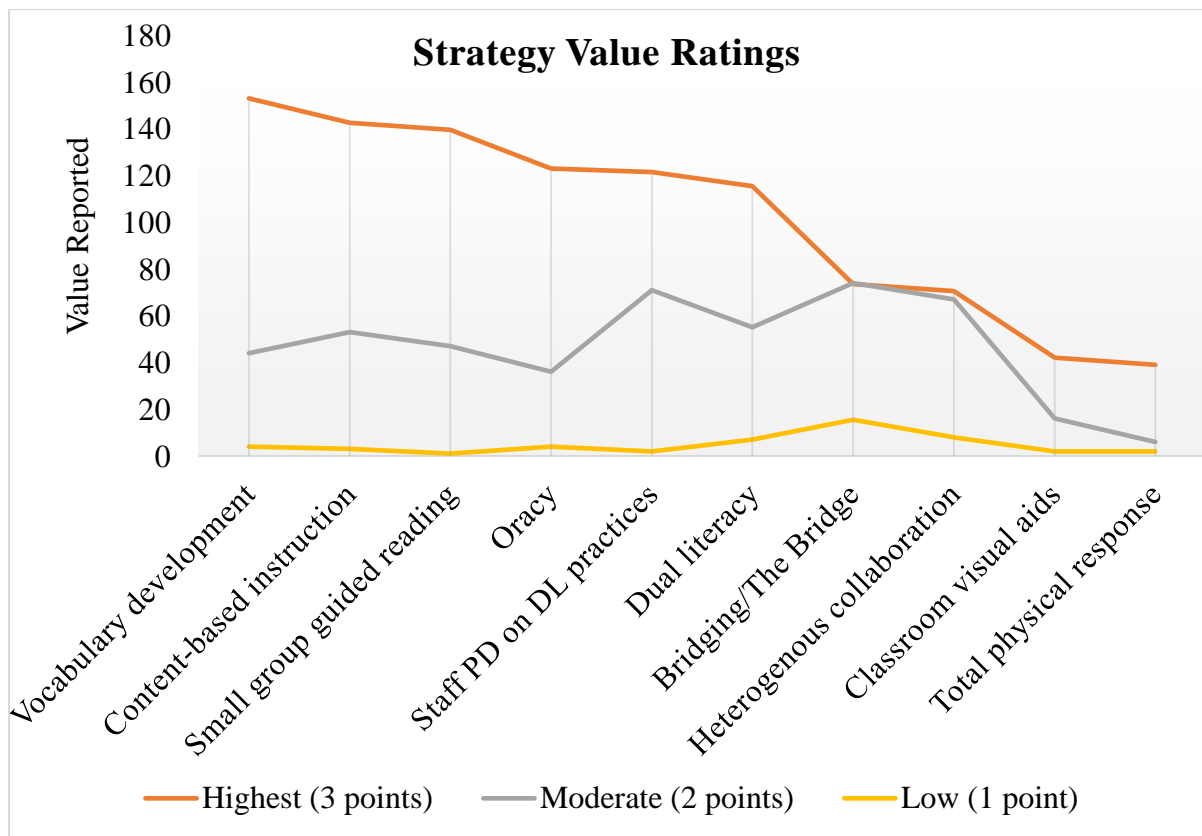


Figure 4.5. Value ratings of TWI strategies used by participants to teach literacy.

The strategy of “vocabulary development” was reported as the most effective across all three districts, with a value of 153 points assigned by 66.23% of participants ($n=51$) rating it highly effective, and only four participants rating it as low in effectiveness. Several other strategies received many high value ratings by participants with very few reporting these as moderate or low in effectiveness in the classroom. These included: content-based instruction received a reported value of 142.5 points with over 60% of participants ($n=47.5$) rating it as highly effective, and small group guided reading with a value score of 139.5 points ($n=46.5$). Dual literacy was reported with a value of 115.5, which was rated by 38.5 participants as a highly successful strategy being used at their schools, though over half reported this as

moderate or low. Staff professional development also received a high rating of 123 ($n=40.5$), although the number of participants who rated this strategy as only moderately effective was very close ($n=35.5$) and it received the lowest rating by two teachers. Differences were noted both between districts and within districts regarding how effective the professional development was in helping to teach literacy in TWI classes.

The remaining strategies depicted in Figure 4.5 emerged from the interviews of program coordinators and administrators which were reported as effective in TWI instructional practice and included in the findings. The most highly rated strategy to emerge from these interviews was “oracy,” which was described by one district program coordinator as “the explicit and intentional oral use of the target language through the development of speaking and listening skills.” Every district level coordinator and seven of the 10 school administrators emphasized how important the development of oracy was in the evolution of becoming literate in the target language. “If the students aren’t speaking the target language while learning lessons in various contexts, they do not develop strong language skills,” stated one program director. A site-based TWI coach also shared that “teachers need to plan time in their lessons for oracy so that students can apply what they are learning through listening and talking about what they are learning in Spanish.” The oral use of the target language was highly rated by 35 teachers and six administrators, rated as moderately effective by one administrator and 18 teachers, and had a total value rating of 165 when all the ratings were combined.

Another technique highly rated for its importance as a dual language strategy was the concept of “bridging,” also referred to as “The Bridge” in a similar context. These strategies were new practices for two of the three districts with varying degrees of success, but it is

critical to note that there were various methods being used to employ this emerging TWI teaching strategy. A principal from one district referred to “bridging” as a quick review of the content learned in one language which was then expressed by the teacher in the second language with a review of cognates, or words that look the same in both languages. There were several references to this strategy as being impromptu and more of a review than a lesson that could stand alone. ‘The Bridge’ was described by a number of study participants as being more deliberate and something that was developed through lesson planning. One district participant described “The Bridge” as being,

. . . a purposeful mini-lesson taught at the end of a unit that may last three to five days, allowing students to express the content they learned in one language in the second language . . . which always concludes with some sort of a written report in the second language.

While not all schools or districts were employing these emergent strategies, the ratings regarding their effectiveness was noteworthy since they were not discovered in a review of current literature. An interesting result of this data analysis was the percentage of participants who responded to each strategy as being highly effective. Because some of these strategies emerged in one district but not in another, the number of ratings each strategy received fluctuated; some strategies were rated by 78 participants and others by as few as 18. The percentage of teachers using these strategies showed a different perspective on their effectiveness in teaching literacy. Figure 4.6 depicts the percentage of participants reporting their use in classrooms and identifies how many participants rated them. In some cases, such as vocabulary development, small group guided reading, and content-based instruction, the value assigned by respondents and the percentage of participant responses were consistent, showing strong correlations to the findings in Figure 4.4 Other results showed a balance between the value of the strategy and the percentage of teachers rating them. Staff

professional development on dual language practices and dual literacy strategies were highly valued by 52% and 53% of teachers respectively, yet these were rated as moderately or low in effectiveness by almost half of the respondents.

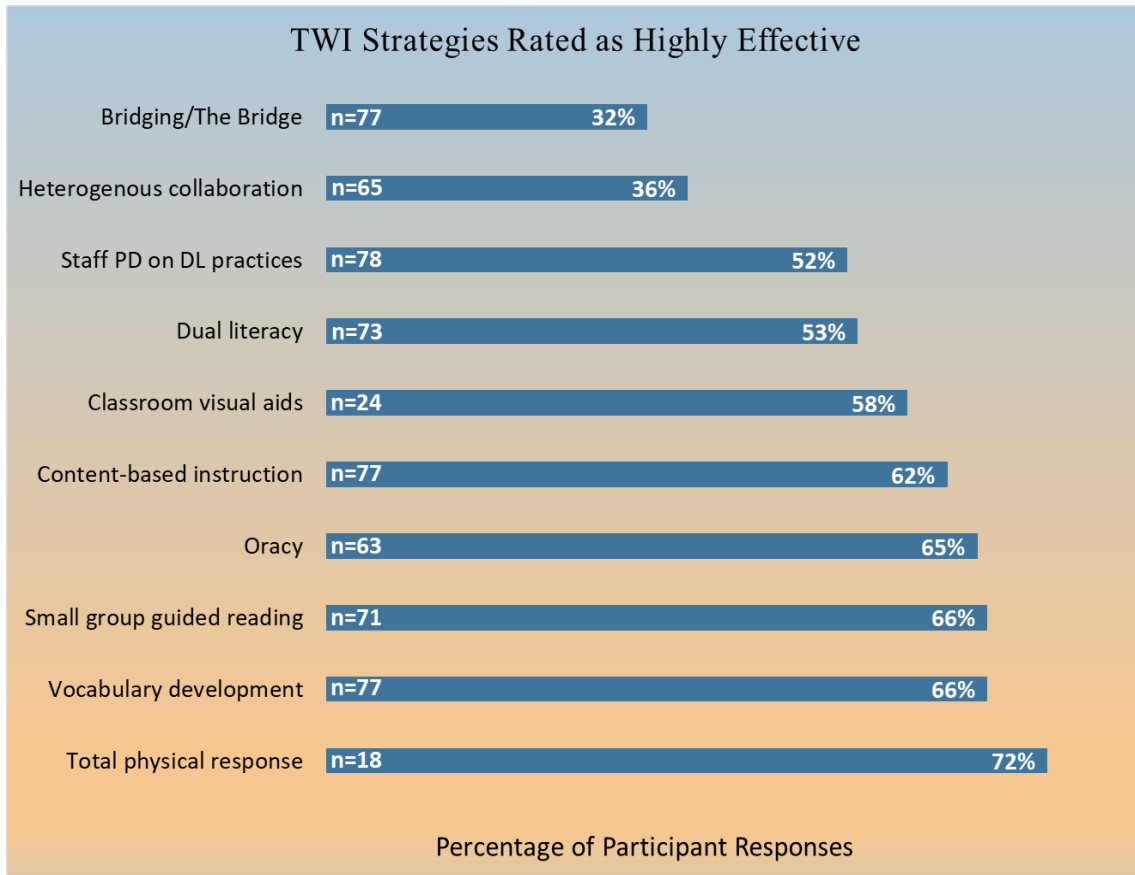


Figure 4.6. Percentage of respondents rating strategies as highly effective in instructional practice.

There were also a few strategies that were not rated by many teachers, thus resulting in a lower total value score; yet, the percentage of those who did rate them as highly successful directly contrasts with the value results. For example, ‘total physical response’ was rated by only 18 teachers, resulting in a highly effective value score of only 39, yet 72% of responses rated this strategy as a highly successful for its use in the classroom, which is the highest percentage rating for any individual strategy. According to one teacher, “This

strategy means connecting a motion or movement to vocabulary, and the teacher and students used that motion when using the word. The motions are the same across the grade level and across the languages to help bridge.” Oracy was also rated as highly successful by 65% of teachers, and the use of classroom visual aids was rated highly by 58% of participants. Heterogeneous collaboration was rated as highly successful in their classrooms by fewer teachers (36%), and the bridging strategy, or ‘The Bridge’ had mixed results on its effectiveness, with 32% ($n=24.5$) rating it highly successful, 48% ($n=37$) rating it as moderately successful, and 20% ($n=17.5$) rating it low in effectiveness as a literacy strategy. Several comments regarding these emerging strategies centered around the idea that they were new strategies being added to their TWI practice and they had not yet fully been able to implement them in the classrooms. Other participants supported that notion by commenting on a lack of training or time to fully implement the new skills into their lessons.

Teacher participants were then asked to rank the top seven strategies identified in the interviews according to how often they were being used in their classrooms. They were also allowed to identify any other strategies they were using, which resulted in nine strategies to be included in the frequency chart (see Figure 4.7). Responses were reported in increments from ‘Always’ to ‘Never’ and compiled across all three districts to show the most used strategies in the TWI classrooms involved in the study. The most frequently practiced strategies are represented by the percentage of teachers reporting the use of the specified strategies and ordered by the highest percentage of teachers reporting these being used ‘always’ first, then by the highest responses for ‘most of the time.’ According to this chart, the strategies being used most often were named by individual teacher participants as highly successful and included a wide variety of pedagogy specifically used in TWI classrooms.

Strategies Used in the Classroom

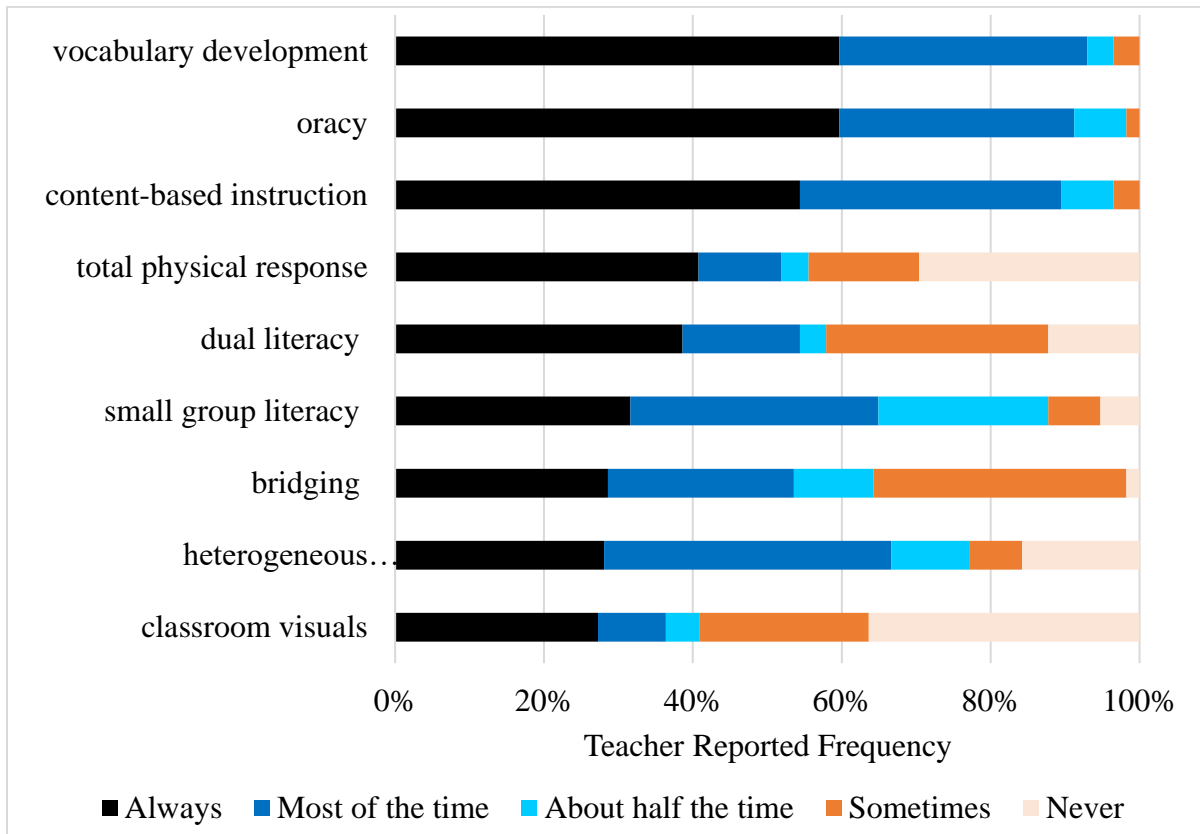


Figure 4.7. Instructional strategies used to teach literacy in TWI classrooms.

Teachers were asked to describe these strategies, which included many variations of dual language and best practice. It is important to note that educational practices in a DL classroom can look both very similar to those being used. The most frequently used strategies included vocabulary development, oracy, and content-based instruction, with over 50% of teachers reporting that they always apply this strategy and nearly 90% using them always or most of the time. The strategies used a bit less frequently included small group literacy, dual literacy, total physical response, and bridging. These were noted as best practices being used at the schools in the study by either program coordinators, administrators, or the teachers, several which are included in a program called Sheltered Instruction Observation Protocol (SIOP). Further details of significant results of this dataset reported by study participants

included a deeper analysis of six of the instructional strategies being used to promote LEP student proficiency in literacy. These are identified in the proceeding findings as critical information used to answer the primary and secondary research questions and noted by the research with implications and recommendations in the summary of the study.

Finding 5: Vocabulary development. The importance of vocabulary seems evident to all participants within the study, and the ratings of the strategy are among the highest within the study. Highlighting the importance of this strategy are the data that speak to its effectiveness and use, although there is some dissention from teachers regarding actually having the time to perform this strategy with fidelity in the classroom. District alignment of this strategy also had mixed results, as one district had it mapped within their curriculum and teachers were following it, another had it mapped with only some teachers following it, and the other had not explicitly mapped vocabulary within their curriculum. Several themes emerged from the data collection:

1. Rated as the most highly valued strategy by study participants.
2. Reported as an effective strategy yet poses a challenge in practice.
3. Districts advocate for developing emergent 'oracy' strategy in TWI.

Qualitative. The importance of vocabulary development ranked highest among all strategies discussed by interview and questionnaire participants, with the highest rating of effectiveness identified by over 65% ($n=51$) as the most valued factor promoting student success. Concurrently, 80.3% of teachers ($n=53$) reported vocabulary development as a strategy used most often to teach literacy in their classrooms. How vocabulary development was incorporated into instruction varied across districts and schools. However, there was a consistent and pervasive focus on building proficiency in students using all four language

components including reading, writing, speaking, and listening. This was noted by 95% of interview participants ($n=20$) as a key to the success in developing biliteracy in students. District representatives all agreed that this was the most important strategy, but they also recognized that there are many ways to implement vocabulary development in DL classrooms. Two of the three districts incorporated a biliteracy model into the curriculum, using content-rich lessons to develop vocabulary in both languages and targeting terms through language allocation planning. This method was advocated for being built into the curriculum at the district level by all district coordinators, yet the explicit teaching of vocabulary varied across the districts and schools. While one district coordinator reported that best practices look different in DL adding that “curriculum mapping builds vocabulary into the content areas to focus on biliteracy skills,” a site-based literacy coach in the same district explained how “DL teachers don’t have time to teach vocabulary explicitly and just try to cover the basic components of the lessons.”

Comprehensive planning and execution of vocabulary across the TWI schools was noted to be an effective method of delivery for one district, and the inclusion of a study of ‘cognates’—words that have similar spelling and phonemes—was incorporated in all districts to bridge vocabulary development in both the Spanish and English languages. Oral language development was also noted as a key component of an effective vocabulary program in every district. Protecting Spanish literacy was identified as a critical goal by two of the three districts, and all districts advocated the need for teachers to adhere to the language of instruction of each lesson to promote student use and understanding of the vocabulary. A vast majority of teachers completing the questionnaire (94.8%) rated vocabulary development as a moderate to highly successful strategy promoting student success in their DL classrooms.

When asked to rate the overall effectiveness of teaching vocabulary in the content areas on a scale of 0 to 100, the mean rating from 53 teachers was $M=75.96$ with $SD=14.81$. However, when describing the most challenging part of maintaining the fidelity of the TWI instructional program, many commented on the difficulty of adequately delivering explicit instruction in vocabulary development. “Staying in the language of instruction is difficult for me, because I don’t want to leave kids that are struggling in Spanish behind,” stated one teacher. Several others reported, “Getting students to speak Spanish during Spanish class time” was a challenge. Among other comments was a critical concern that schools struggled to keep Spanish language development as important as the English language development for reasons such as testing in English and being part of the greater English-speaking society.

There were several recurring practices noted for vocabulary development across all three districts, including oral language development; explicit vocabulary instruction; the study of cognates; language objectives incorporated into the curriculum; and the use of content areas to deliver rich vocabulary. The frequent use of vocabulary development and oracy both ranked the highest among teachers, with 60% of all respondents reporting to always include these components in their daily instruction. Another significant finding was the report of the development of student ‘oracy’ by every district program coordinator and 19 of the 21 interviewees in the structure of vocabulary development. The term ‘oracy’ was referred to as “the development of the students’ ability to speak, listen, and respond to oral language in the academic setting” by one district program coordinator. It was a highly lauded goal by interviewees and teachers alike across all TWI programs in the study. After speaking with the interviewees, this strategy was added to the teacher questionnaire as it was apparent that it was a strategy explicit to DL instruction. Over 91% of the teachers reported the using

this strategy in the classroom most or all of the time, and 65% of teachers ($n=41$) rated it as highest in promoting student academic success in literacy skills for Spanish-speaking LEPs in their TWI classrooms. While ratings of vocabulary development varied, there was strong support for the use of explicit vocabulary curriculum across all three districts:

Vocabulary must be comprehensive . . . reading, writing, listening, and speaking the target language.

We have to be sure that during lessons students stick to the language of instruction!

Explicit, key vocabulary units are needed . . . there must be comprehensive vocabulary instruction in both L1 and L2.

There is much needed growth in our vocabulary program . . . further development for us because explicit vocabulary instruction is getting slighted in our classrooms.

Quantitative. The data collected from the teacher questionnaire included descriptive statistics showing the use of vocabulary development, the rating of its effective use in literacy instruction, and the percentage of time teachers were using this strategy to teach literacy in both Spanish and English. These data supported previous research identifying vocabulary development as a key component to a successful dual language program.

Comparison or integration. The rating data showed positive results for vocabulary development, yet how this best practice was delivered in a DL classroom was distinctly different from traditional classroom delivery and varied from school to school. These data, which answer and address both primary and secondary research questions, show the potential for a positive relationship between the TWI program and Spanish-speaking LEP scores on the Reading EOGs. Integration with the qualitative findings supports the notion that there are additional benefits to participation in the TWI for LEP students that go beyond the reading assessment scores.

Finding 6: Content-based instruction. All three districts advocated for the use of content-based instruction to support the development of literacy skills for Spanish-speaking LEPs. It served as a scaffold to integrate language learning in context with core content curriculum. Study participants rated this as the second highest valued strategy across all districts for teaching in TWI classrooms. Several common themes emerged regarding the delivery of language objectives through core content areas:

1. Highly rates strategy by practitioners across all eight schools.
2. Naturally integrates curriculum and language teaching standards.
3. Limitation of available resources in target language to support content learning goals.

Qualitative. This strategy was highly rated for its value in promoting student success in literacy proficiency by 61.7% of all study participants ($n=47.5$), and 66.67% of teachers ($n=38$) rated it with the highest levels of success in the classroom. There was strong support in interview responses regarding the reason for this strategy being so successful in dual language programs, with several noting the use of techniques blending the teaching standards in English and Spanish. “Integrating literacy into the content of lessons in core areas makes a lot of sense when trying to embed literacy into science and social studies,” stated one seasoned district representative. Collectively, this strategy scored a value rating of 198.5 combining all value ratings, with the value mean being $M=2.65$ and a $SD=0.56$. When questionnaire participants were asked to rank which instructional strategies they used most often to teach literacy in their classrooms, 31 teachers reported using this strategy all the time, which was more than half (54.4%) of all responding to the inquiry. Teachers collaborated to develop plans which combined learning goals for their grade levels, and

several districts promoted this process by paying for teachers to work over the summer to develop units. “Our teachers are getting good at identifying which standards are best met in which content areas,” boasted a district coordinator. A literacy coach from the same district voiced another opinion, however, stating that “everybody wants to be done with the writing of curriculum maps. It’s my job to keep them motivated.” While this strategy was rated as highly effective, there were other considerations noted regarding the ease of implementation.

The challenges facing teachers in TWI programs are many, including time, resources, and the evolution of the TWI programs. Teacher questionnaire responses regarding the biggest challenge of maintaining their DL program resoundingly stated that the lack of time and resources were primary issues they faced, with content-based interaction requiring both:

There are not many resources in Spanish to teach social studies.

The availability of authentic materials in Spanish make it difficult to cover all areas of the curriculum . . .

A model DL classroom checklist includes 300-350 library books with at least 50% non-fiction to support content learning in science and social studies . . .

One of the greatest challenges has been planning a consistent unit with all the district requirements and school requirements. Every year we’ve had to re-plan everything and almost start from scratch.

It is difficult to fit in all the teaching we plan for in the short time that we have for each subject.

Quantitative. Using descriptive statistical analyses from study participant information collected and the strategy rating card, data were analyzed and showed noteworthy results. This strategy was also analyzed for effectiveness ratings, frequency of its application, and strategies used most often on the teacher questionnaire.

Comparison or integration. Findings from this analysis concluded that this particular strategy is well suited for application in dual language TWI classrooms. It allowed for

integration and the embedding of standards from both the content area and the Spanish language standards to be integrated. The practicality of its use, however, was noted as a deterrent due to extreme time limitations in the classroom and limited resources from which to support the learning objectives. Depending upon the structure (or lack thereof) for the program, teachers were responsible for developing many or most of the resources needed to warrant this strategy the greatest success at promoting literacy proficiency for its Spanish-speaking ELLs.

Finding 7: Dual literacy instruction. Several datasets point to this strategy as being effective and explicit to the dual language curriculum. It was ranked moderately both in its effectiveness value and its use in literacy instruction across all districts. The challenges faced by districts and schools in implementing this strategy have devalued its impact on promoting literacy for LEPs enrolled in TWI programs. While the concept of teaching literacy in both languages seems fundamental to dual language programs, in order for teachers to develop literacy standards for both English and Spanish a delicate balance of instructional time and language allocation is required to meet all of the instructional goals. Some recurrent themes arose from the data collection:

1. Ratings of effectiveness for strategy are moderate across all districts.
2. Teachers rated effectiveness lower than administrators.
3. Teacher experience and staffing issues impact delivery of the strategy.

Qualitative. At the core of dual literacy is literacy instruction, which is intended to be executed in both languages in some measure within TWI programs, although varies by program model. Based upon its constructs, one might imagine that this strategy is a cornerstone of TWI instruction. One principal assured "...the data [are] telling us to teach

literacy in both languages.” Many interview participants reported that they had incorporated an explicit biliteracy framework into the TWI curriculum, and several noted the importance of having time for training, planning, and teaching biliteracy. Including both interview and questionnaire respondents from the study, a high value rating of 115.5 ($n=38.5$) was reported, with over one-fourth ($n=27.5$) rating it with moderate effectiveness and seven rating it as low. Only 49.1% of teachers ($n=25$) rated it as a high yield strategy compared to 61.4% of administrators and coordinators ($n=13.5$) rating it as highly effective. This disparity in the data is noteworthy and may point to a possible issue with the effectiveness of dual literacy. When evaluating the overall effectiveness of teaching reading, writing, and speaking in both English and Spanish, teacher responses showed the highest success in Spanish oral literacy with a mean of 73.93 and a $SD=18.84$; then English oral literacy mean of 72.74 with a $SD=24.35$; and Reading in Spanish ranked third with $M=71.06$ and $SD=15.78$. Reading in English and writing in Spanish fell in the middle with $M=65.49$ and $SD=20.94$, and the $M=62.19$ and $SD=27.46$, respectively. The skill ranking the lowest was writing in English with a mean of 55.35 and a $SD=25.26$. Although the native language demographic was not requested, many teacher names were Hispanic, which may present an assumption since a majority of the 54 teachers who responded to this question may have been Spanish speakers.

There were comparative data and qualitative information that identified various possible reasons for the lower reported effectiveness scores received by the evaluation of the dual literacy strategy. First, the number of teachers with 0-3 years of experience teaching in these TWI schools was very high. Almost 53% of teacher participants ($n=37$) were novice teachers to dual language. The amount of time and experience that is required to master the curriculum may not yet have been met by over half of these program teachers. This could

make it very difficult for a TWI teacher who is new to the program to effectively teach using dual literacy strategies, much less manage the classroom, learn the state standards, and assimilate into the school community. Other issues with staffing have also been noted in district and site-based administrative interviews. “Staff turnover for dual language causes inconsistencies in instructional delivery,” stated one district DL coach. Another principal shared that they “. . . hope not too many dual language programs start popping up across the state or I won’t be able to staff my own program!” Many schools reported hiring teachers who were recruited from Spanish-speaking countries to fill dual language teaching vacancies due to a shortage of qualified candidates. “Making the transition to another country and a different culture than theirs is difficult for visiting international faculty at our schools,” stated a program director. Another district-level participant shared that, at some points during the earlier stages while trying to fill positions for their program, “We would sometimes just take anybody who was willing to teach in the TWI classrooms even though they weren’t qualified.” Several school program coordinators reported that they had begun a school year short a few teachers because there were literally no qualified candidates. Teachers reiterated complications of the same nature in their challenges of the program:

Schools [are] constantly changing teachers, some because of short exchange program commitments, others leave because of the high levels of pressure and workload.

VIFs (visiting international faculty) say they don’t feel confident when teaching English, especially phonics, guided reading, etc. because they are not receiving enough training or may not have enough phonetic knowledge of the English language.

Our school district brings international teachers who come with 3-5-year VISAs. The district trains them, coaches them, and when they finally [have] learned the system . . . they need to return to their home countries . . . and the process starts again.

There has to be a better way to recruit and keep strong bilingual teachers.

We do need a program offered by good universities in order for teachers to be professionally certified to teach dual language.

We need teachers! Dual language is a great program, but it needs consistency and teamwork to make it happen.

Quantitative. Ratings and frequency analyses were included in the discussion of this finding, which include descriptive statistics of effectiveness values, frequency of use, and percentages of participants' years of teaching. Also identified were the effectiveness ratings reported by teachers for teaching reading, writing, and oral literacy in both languages.

Comparison or integration. Teachers rated their overall effectiveness of teaching reading, writing, and speaking in both languages, with scores for English instruction being lower than those for Spanish. This may have been influenced by the large number of Spanish-speaking teachers who participated in the study, though the native language was not an inquiry made regarding teacher demographics. Comparing the differences in response from the teachers and those in administrative or program director roles, it appeared that the theory of dual literacy was more idealized than when actually being put into practice in TWI classrooms. Some of this disparity may be explained by comments regarding the difficulty of unpacking the standards and allocating them to two different languages. Another factor uncovered in this study was that many programs have yet to be fully developed. The time and resources available to fit in all of the required curriculum is an extremely difficult task, one that takes a number of years of experience working within the dual language framework to incorporate into teachers' skill sets.

Finding 8: Small group literacy instruction as a teaching strategy. There were strong responses to the questions regarding the use of small group literacy instruction by all districts. The ways in which the groups were constructed differed, but the vast majority of

study participants placed a great value on this practice. However, using language as a variable for grouping the students was not common in two out of the three participating districts.

Several themes emerged:

1. A majority of participants highly valued small group practices.
2. Group construction varied greatly across participating schools.
3. Language not typically the focus of groups, but Spanish speakers gained a voice.

Qualitative. High values for success were reported for small group literacy instruction by administrators and teachers alike with 65.54% rating it highly effective ($n=46.5$) and 87.9% of teacher respondents ($n=50$) reporting a frequency of use at least half of the time as a successful strategy for promoting literacy in their classrooms. Two districts explicitly noted the use of guided reading with the focus being placed on reading levels in both languages, and language skills being used to create reading small groups or student pairs. The third district reported that “they group students in first and second grades only by language needs to promote the use of the target language.” This district also added that small group instruction was conducted only in English from third through fifth grades to support students as they developed English proficiency in the testing grades. A principal from another district stated that “while the student in literacy groups are assigned based on reading level, there is a gradual release of responsibility for the students to use the target language.” The conceptualization of conducting small group instruction and the reality of making it work in the TWI classrooms was reported as challenging. To apply this best practice in a DL setting with a focus on biliteracy required a huge shift in ‘how’ this strategy was implemented. Several districts noted that they do not require both the Spanish- and English-taught classes to conduct small group literacy instruction. “The biggest issue is that there are unclear

language objectives, and we are trying to avoid duplicating content standards in both languages,” added a district program coordinator.

Some teacher feedback reported that when they were able to group students by language it was very beneficial: “I love to elevate individual student status by letting them be the language coach for another student in their group who is struggling. That way both native Spanish speakers and native English speakers get to take turns being the expert!” Also noted by interview participants as a structural component of small group instruction was that they were teacher-dependent for guidance, and that program implementation varied from school to school based upon the needs of the students and teacher experience. Further teacher questionnaire responses addressed some of the challenges of conducting effective small groups for literacy in both languages:

The students are involved in decomposing text to improve reading skills and comprehension, and that takes a lot of time . . .

It’s hard to get all the small groups in with the short time, so we switch back and forth between Spanish and English classrooms.

Since we don’t do small groups by language, teachers create student language pairs to give all of our kids a voice.

It is difficult finding materials that are based on content standards but at a level the students can access independently or in guided reading.

Quantitative. The data collected from the teacher questionnaires showed several statistics regarding the use of small group literacy instruction, its effectiveness rating by teachers in literacy instruction, and the percentage of time teachers were using this strategy to teach literacy in both Spanish and English. There was a limited dataset to establish a positive correlation regarding the use of small group instruction as a component of successful dual language programs since most classrooms were not using this strategy to promote biliteracy.

Comparison or integration. Since the objective of using this strategy to promote biliteracy was typically not a focus in TWI classrooms, the responses regarding frequency and descriptive statistics were of little value to this research. The verbal and text data collected during the qualitative phase of this study highlighted a more in-depth look at the actual practices being used by teachers. Several positive outcomes stemmed from this set of data, which focused on academic goals other than language development through reading groups. The notion that students who do not speak the majority language in the schools are given a voice and seen as a resource by other students hoping to learn Spanish allows for this to be an important finding in the study. This also addresses the conceptual framework of socially just pedagogy which provides LatCrit sensitive instruction where SSLEPs can be the beneficiaries of a strategy that is specifically targeted to promote their academic experience.

Finding 9: Heterogeneous collaboration. While the strategy of heterogeneous collaboration was held in high regard by the professional education community as a ‘best practice,’ it was not reported as being highly effective in the TWI programs. The intentionality of heterogeneous collaboration in tradition classrooms is to pair learners with different levels of proficiency in academic content, but in a TWI setting, language must become part of the grouping strategy as well. Many participants reported that they did not use this strategy at all during literacy instruction due to extreme time constraints in the dual language immersion environment, and many rated its effectiveness as one of the lowest regarding its use in TWI classrooms. Several common themes emerged:

1. One of the lowest rated and least used strategies across all TWI schools.
2. TWI models support heterogeneity, but rarely group explicitly by language.
3. Supportive comments for use as a TWI instructional strategy not reported.

Qualitative. The mean scores for the value associated with the effectiveness of this strategy to promote literacy proficiency for LEP students in the TWI programs was one of the lowest, with a mean of 2.34 and a $SD=0.56$. The only strategy that ranked lower on more measures than heterogeneous grouping was ‘bridging,’ which had been identified as a brand-new practice currently being implemented in only two of the three districts. Of the 82 study participants rating this strategy, almost one-fourth of educators ($n=18.5$) rated this strategy as not being applied in the DL schools with a value of zero, and only 28.6% of participants ($n=23.5$) rated this strategy as highly effective in teaching literacy to their DL students, with a value score of 70.5. “I don’t see very much ‘purposeful collaboration’ when I conduct dual language classroom observations,” voiced a seasoned DL principal. This strategy received the lowest score out of all strategies when asked which instructional strategies are used most often in their classrooms, with a mean of 3.56 coupled with a high standard deviation of 1.38.

When asked to comment about why this strategy was not more highly used, a district coach stated, “To develop groups for collaborating based upon language skills, it would take the teachers too much time. They usually focus on ability levels in the content areas for any collaborative grouping.” A principal from another district shared that, due to the strong language balance established at the beginning of the year, some of the teachers who had more experience would use this strategy very effectively. They also commented on how difficult it is to learn how to develop effective heterogeneous grouping strategies, and that “many of our teachers leave by the time they finally figure out how to do it well.” Another district-level participant reported that first and second graders are explicitly grouped for heterogeneous collaboration by primary language to allow for literacy development in the target language. This district then grouped students homogenously in all third- through fifth-grade DL

classrooms to focus on English literacy development due to being tested in English on the North Carolina reading EOG assessments. The remainder of interview participants consistently reported that the practice of heterogeneous grouping was not a strong strategy being used in their TWI programs:

Because we initially place students into classrooms with a heterogeneous language balance at the beginning of the year, teachers do not explicitly group their kids this way during instruction.

Any groups that are formed in the DL classrooms ideally already have a language mix, but some classrooms you see clearly that students who speak English are often in higher reading levels for English, and native Spanish speakers are in higher leveled groups when the language of instruction is Spanish.

We try to group students to balance native language heterogeneously, but some of the schools have very few native Spanish speakers. This causes a disadvantage to the program model, sometimes resulting in a shift to a 90-10 model to meet the needs of the strong language majority.

Most grouping of students in the DL classrooms is done by reading level, not by target language skills.

Quantitative. Participant ratings for instructional effectiveness and use were analyzed to find descriptive statistics and frequencies. Both interviewees and questionnaire participants reported findings that mimicked one another, and as a group they showed modest value of the use of heterogeneous collaboration based upon target language skills.

Comparison or integration. Through analysis of the qualitative data collected from district-level and site-based administrators and coaches, the implementation of this strategy done explicitly for literacy instruction was minimal. Teacher feedback was limited to the ratings, and the anonymity of the questionnaire preventing deciphering which teachers had rated this strategy most highly successful and more often implemented in their literacy instruction. The impression that more tenured DL teachers had greater success in purposefully applying this practice was based upon language ability, yet the focus seemed to

be placed more on reading level in the target language than any other student sorting variable that might be applied.

Staff Development for DL Teachers

The literature reviewed on current practices in dual language classrooms consistently reported that the continued education for teachers working in DL programs is a primary means to promote student success in literacy proficiency (Darling-Hammond, 1998; Francis et al., 2006; Lindholm-Leary, 2012; Lindholm-Leary & Block, 2010; Theoharis, 2009). It is also largely noted in the educational community that professional development (PD) is a ‘best practice’ for all teachers, and some districts in the study embraced this concept more than others. Delving further into the core components of the participating districts and schools resulted in an array of methods being used to support teachers working in dual language classrooms.

Finding 10: DL Staff professional development. Every district within the study reported that there was a great need to develop strong instructional skills in their dual language teachers, although support for PD in the TWI programs varied greatly. All participants responded positively to the notion that with more professional development for their DL teachers, students performed better on literacy assessments. The degree to which a district was involved with training teachers directly impacted teacher buy-in and student performance. While each district in the study had a unique design for professional development, several strong themes emerged:

1. Varies greatly across all three districts.
2. Highly valued by a large majority of study participants.
3. Primary teacher professional development accomplished through coaching.

Qualitative. According to responses on the teacher questionnaire, professional teacher training was reported as being organized at the district-level by 61.4% of the respondents ($n=35$), while 38.6% of the respondents ($n=22$) stated that they were either unaware of any dual language training or there was none available. One district reported a current trend driven by the district program coordinators and professional development specialist, and teachers working within these schools voiced strong buy-in to the district initiatives. “We are so lucky to have the district behind us in trying to expand our dual language program,” stated a teacher participant from this district. Participants of the teacher questionnaire were asked to evaluate the effectiveness of training offered through their districts, and of the 57 who responded, almost half ($n=27$) felt that the PD offered by the district was definitely valuable, and the other half ($n=28$) reported that it was only valuable to their practice sometimes. The evaluation of PD to promote program consistency in dual language schools was also rated by teachers, and 36.8% of teachers ($n=21$) believed that the PD offered was to align the TWI curriculum, 47.4% ($n=27$) reported that sometimes this type of PD was offered, and 15.8% said that there was no district training offered to promote consistency in program delivery.

Other feedback received was not always positive. One district participant included comments regarding their greatest challenges stating that “many times trainings are scheduled during planning time and on district PD days, so teachers on the dual language teams have less time to build their lessons.” Another district interview participant reported that, while there were some district professional development and inter-district collaboration initiatives for TWI teachers, “the schools organize and conduct most of the training for their dual language teachers on their own.” Several of the principals from this district shared that they had hired outside professionals on dual language to come into the classrooms and

conduct audits of their DL practices. They then met with the teachers to discuss the data. “What has evolved from our school through site-based teacher training is the ability to collaborate across the grades and build really amazing instructional units.” While several districts had explicitly devised plans to address professional development for its dual language teachers to target their specific set of needs, that was not always the case.

One district offered little support for dual language teacher development and left the schools to conduct ‘in-house’ training. Explained by one of the administrative teams in the district, “Our school is a Title I school, so we can use the funds towards the dual language program. Last year we used most of it to buy much-needed resources in Spanish, so there was no PD for dual language teachers.” In this district, teachers were all invited to attend the same district training offered to all schools; however, the training was not formatted to address the differences in teaching in a non-traditional classroom. For this reason, their professional development failed to address different needs of the staff working in the TEI programs in the district. Teachers in the TWI classrooms voiced additional challenges they faced in light of their limited opportunities to learn and develop their practice:

Teachers who are new to teaching need a lot of support, but teachers who are new to dual language classrooms need special training to be effective teachers in a language immersion program.

Half of the time I feel like I am just repeating what was taught in the other language class, and students won’t listen during target language instruction because they know they’ll get the same lesson in their native language again.

Professional development or training is greatly needed in our district, particularly [for] new teachers.

There is a definite need for training in best practices to teach in a dual immersion program.

Another consideration for specialized professional development for TWI was the practice of site-based teaching observations and coaching. A teacher from one district reported, “training in my school is usually provided by the curricular coach.” Questionnaire participants reported that they were evaluated on their ability to deliver effective pedagogy in their TWI classrooms through observations and coaching. An overwhelming majority of participants (94.7%) reported that classroom observations were conducted of their teaching, with 66.6% being coached at some time during the process of being observed. Twenty-six teachers (45.6%) stated that they received coaching before their observations, 29.8% were coached during observations, and 59.6% reported receiving coaching after their observations. One teacher commented that her principal had promoted self-reflection and goal setting for the observations, which gave the observer something to look for during the observation. Afterwards, during a post-conference they would meet “...to discuss the ‘glows’ and the ‘grows,’ similar to what was discussed in the pre-conference.” They felt that the coaching they received during this process was some of the best training they could have and felt proud of what they were doing well. “I honestly think we have some of the best support in our school because my administrators never make me feel bad about the areas I need to improve in.” When asked who teachers were being coached by the most, 52.6% received coaching from dual language or literacy coaches in the school, while 14.8% were being coached mostly by administrators, 10.5% by peers, and 16.6% by district coordinators of hired professional dual language consultants.

Quantitative. Sets of data included in this analysis were derived from interviews and teacher questionnaires, yielding findings regarding formal professional development. Reported by participants were PD opportunities provided to the DL staff via training at the

district and school levels, how often PD opportunities were available to them, how they were being evaluated on their TWI teaching practice, and if they were receiving coaching as a form of professional development. Across all schools, a majority of teachers were receiving coaching by specialists of dual language practice or by school and district administrators.

Comparison or integration. Formal professional development offered at the district level is typically developed and to benefit large groups of educators and may also include the contracting of specialists to develop the pedagogy desired. Program development was reported to be in a state of constant evolution by all districts and schools in the study. It follows that instructional practices were constantly being reviewed in two districts, and there may have been research going into the selection of particular strategies being adopted and implemented by the different districts and schools. The comparison across the three districts showed that one district offered much support, another offered moderate support, and a third offered little support at the district level. While this appears to be confirmed by teacher responses, there was also evidence that more informal training in the form of coaching and mentoring for TWI teachers was occurring at the school level in some of the schools. An in-depth look at particular schools and their resultant EOG scores in the subsequent finding will be done to establish if there is a relationship between student performance and professional development being delivered to the DL teams.

Assessment Data

During Phase II of this mixed methods study, student standardized annual assessment scores were collected from all eight participating schools, including the End-of-Grade reading test given to students in third through eighth grades and the annual ACCESS tests given to all LEPs in public schools. Three of the schools were in their fifth year of operation,

and therefore had only collected four years of data, and the students enrolled in these schools had just reached EOG testing age during the 2016-2017 school year. To include relevant data from every school in the study, scores from the 2013-2014 through 2016-2017 school years were analyzed. Test scores from Spanish-speaking LEP (SSLEP) students who were enrolled in the participating schools for at least three years were included, and they were sorted into two groups: SSLEPs in DL classrooms (DL) and SSLEPs not in DL classrooms (NDL). A comparison of reading test scores was conducted for the two groups by calculating mean scores and standard deviations. The percentage of SSLEPs proficient by grade level and by school was also included in the results and is represented in Appendix M. It is important to reiterate that not only does it take 4-7 years for a LEP student to become academically proficient in English, but the consensus from all three districts was that the greatest impact of DL enrollment on proficiency scores occurred by fifth grade or later. Due to the fact that only one school in the study enrolled middle school students in a TWI dual language program, this set of proficiency data is incomplete. The data outcomes varied by grade level, by school, and across the three districts.

Finding 11: Reading End-of-Grade scores. Proficiency scores on the annual reading test fluctuated within each school, across grade levels, and from district to district. The data provided for this study concluded that a majority of the LEP students in the study enrolled in TWI programs performed at or above their peers in traditional classrooms. Two of the three districts showed results in which the DL students consistently outperformed their non-DL peers. The third district showed results which did not concur with findings from the other districts. Several grade levels typically scored below their peers, but most frequently in the lower grades or schools that were in the earlier stages of development (see Figure 4.4).

Quantitative. A snapshot of district results regarding reading EOG score averages is included in Figure 4.8, showing varying degrees of differences for SSLEPs in DL and not enrolled in DL (NDL). These scores reflected averages calculated for only the schools included in this study and those students who participated in the TWI programs for at least three years. Through analysis of the descriptive statistics, District A showed consistently higher average scores with statistically significant differences ($p<0.05$) for all three years (see Figure 4.8). The limited number of DL students in their programs who were included in the analysis during 2016 may have resulted in a skewed mean, but the results clearly indicate a positive relationship between enrollment in TWI and increased proficiency on the NC reading assessment.

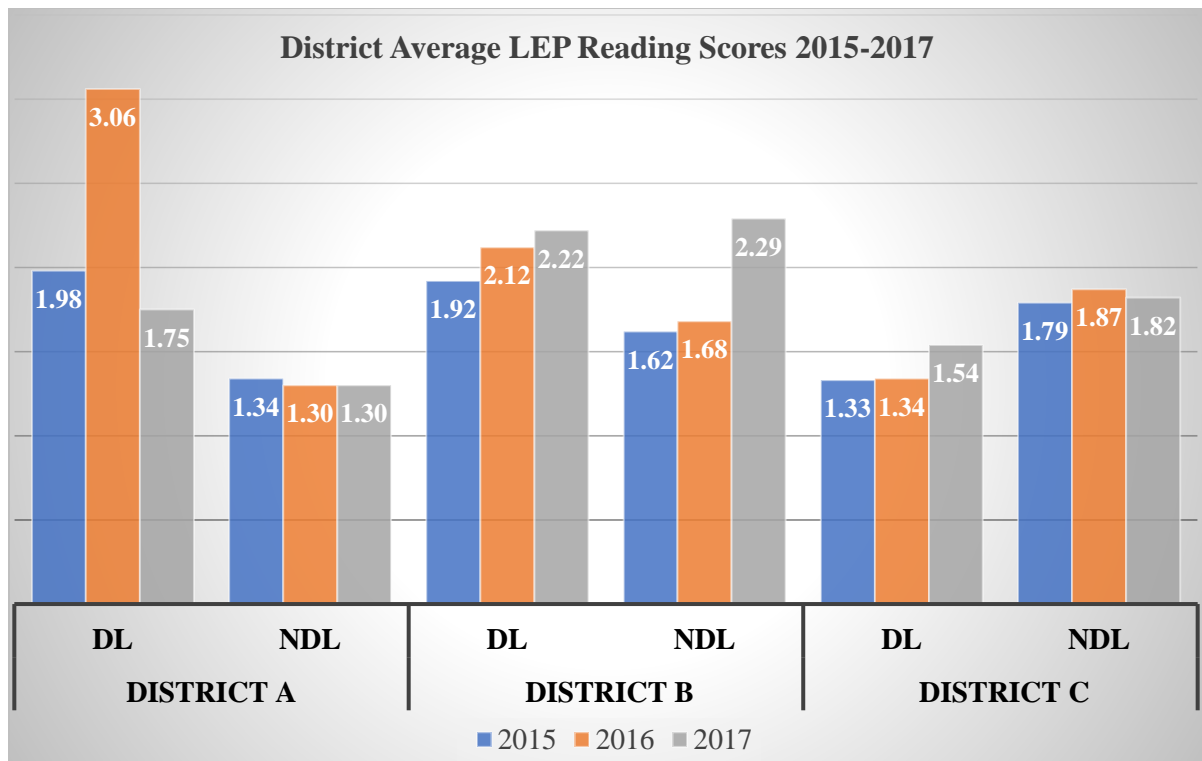


Figure 4.8. Spanish-speaking LEPs average scores on reading EOGs for three years.

Results from District B showed scores that were statistically significant ($p>0.05$) for two out of three years, with DL versus NDL comparisons being not significant in 2017. It is

important to note that most SSLEPs in this district, regardless of participation in a TWI program or traditional program, scored higher than most of the other schools in the study. The opposite results from the analysis was shown in District C, which showed statistical significance ($p>0.05$) in favor of students who did not participate in the TWI programs. The average scores for students from this district were higher for NDL than their TWI peers in TWI programs for all three years. Two out of the three TWI programs were only in their fifth year of operation, and all three schools had been re-districted, which likely changed the dynamics of the schools and the resulting demographics of the student population within them. These factors potentially may have impacted the results.

The average reading levels achieved by each of the two groups were also analyzed by grade level and by whole school to isolate score differences (see Appendix M). These scores were then converted to calculate the number of student who were proficient on the End-of-Grade reading tests each year. Comparisons were made between SSLEPs in DL and not in DL across the three years (see Figure 4.9). While average test scores showed one set of results, these data showed another factor in evaluating program effectiveness. The state average for LEP proficiency was around 18.5% for all three years, and the comparison between DL and NDL SSLEPs attending these schools shows a positive relationship with success in Districts A and B. Over the three years, SSLEPs in DL in both districts show much higher levels of proficiency on the reading EOGs than their SSLEP peers not in DL. In 2016, DLs from District A had 20% greater proficiency than their peers, and DLs in District B had 13.9% greater proficiency than their NDL peers. District C DL students were less proficient than their NDL peers by 7.9% that year. Similar results were found for 2016, with DLs from the first two districts outperforming their peers by 34.3% and 6.2%, respectively,

and DLs in the third district underperforming their peers by 19.9%. Subsequently, the results from 2017 show the same findings with all DLs in Districts A and B at or above the state averages, and DLs from District C performing not only below NDLs, but well below the state averages.

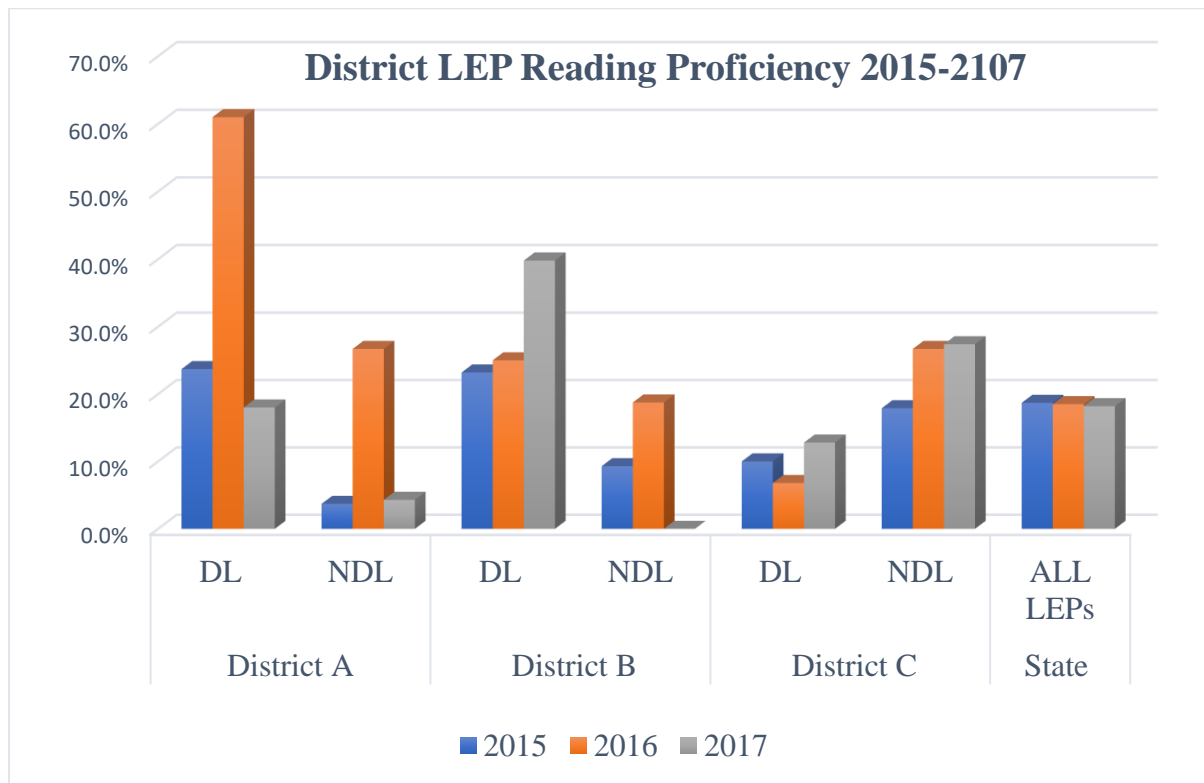


Figure 4.9. Proficiency of students attending TWI schools in the study versus state averages.

Two of the districts provided information regarding reading tests scores as their DL elementary students moved into middle school, allowing for a longitudinal study of SSLEP scores achieved by students who had participated in these TWI schools during their elementary years. An analysis of proficiency scores was done to examine the notion that DL students who participate in the TWI dual language programs begin to perform at higher levels as they progress through fifth grade and into middle school. One of these districts had begun to implement some of the DL practices in middle school, and the other had

implemented a program on a larger scale in one of their middle schools. The number of these SSLEP students with test data at the middle grades was minimal in both districts, but the analysis was worth inclusion in the finding. Results of the analysis showed that students who had participated in the TWI programs in these districts for at least three years far outperformed their peers on reading EOG proficiency while attending middle school, including overall average proficiency scores from the state (see Figure 4.10). While the number of DL students available to track diminished as students moved into middle school, in every instance where data were available the DL students were more proficient than their non-DL peers and far outperformed the state averages for reading proficiency in middle school.

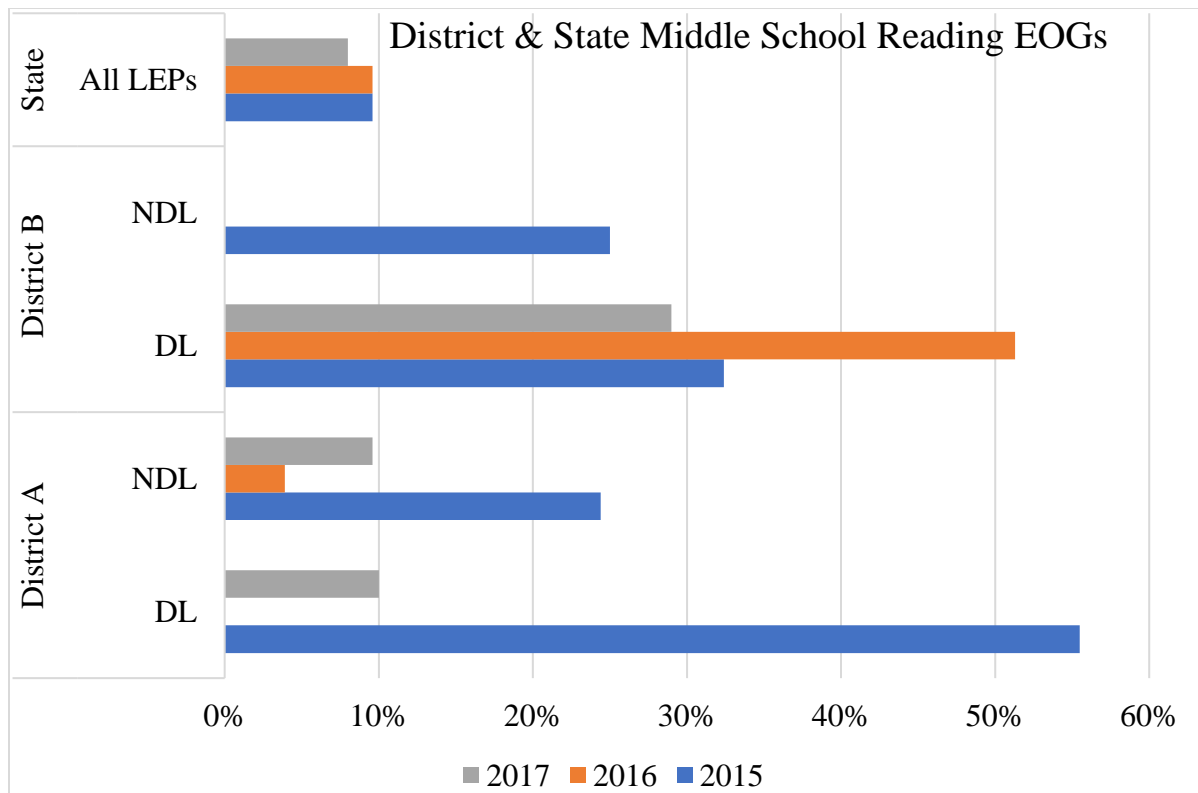


Figure 4.10. Reading proficiency percentages for TWI students beyond elementary school.

Comparison or integration. The results of the reading assessment data concur with the literature findings that support the use of TWI dual language programs to promote literacy proficiency for LEPs. The program dynamics were very different in each district and across all eight schools, which may account for the difference in resulting assessment scores. The way in which the programs were developed, supported, and delivered varied greatly which created the potential to affect the resultant outcomes.

Finding 12: Spanish-speaking LEP exit rates. A review of the rates which LEPs exited their limited proficiency status, as measured by annual ACCESS test scores, was completed for the two districts who showed a positive relationship between TWI program enrollment and End-of-Grade reading proficiency. For students to exit the LEP status in the state of North Carolina, a 4.8 composite proficiency score and a minimum of a 4.0 in both reading and writing proficiency on the ACCESS test are required (North Carolina Department of Public Instruction, 2017). All students who were filtered for inclusion in the EOG data set were included in the analysis of exit rates which spanned from school years 2013-2014 through 2016-2017. The data provided from one district was complete, but some exit information was missing from the other district. Despite being a limited data set, the findings were relevant for inclusion in this study.

Quantitative. Exit data was obtained from District A from 2016 and 2017, and District B provided exit data from 2014 through 2017. Compiling student exit data across all four school years required the inclusion of all students who had participated in a TWI program for at least three years. In some cases, these students were attending middle school during the years being evaluated in this study but had attended one of the participating TWI school for at least three years prior to entering middle school. For that reason, the scores

include all Spanish-speaking LEPs (SSLEPs) who attended one of the participating schools, and in some cases, scores were available through eighth grade. Tracking this same population in District A was more difficult as the data regarding which school students attended by year was not readily available, so this partial data set was used to obtain their exit rates for two school years. A Chi-square test was conducted to compare SSLEPs from the study schools to determine if there was a significant difference in the exit rates of the DL and NDL groups. Figure 4.11 illustrates that District A showed a slightly higher exit rate of 14.3% ($n=25$) for their SSLEPs in TWI over their NDL peers with exit rates of 9.4% ($n=23$).

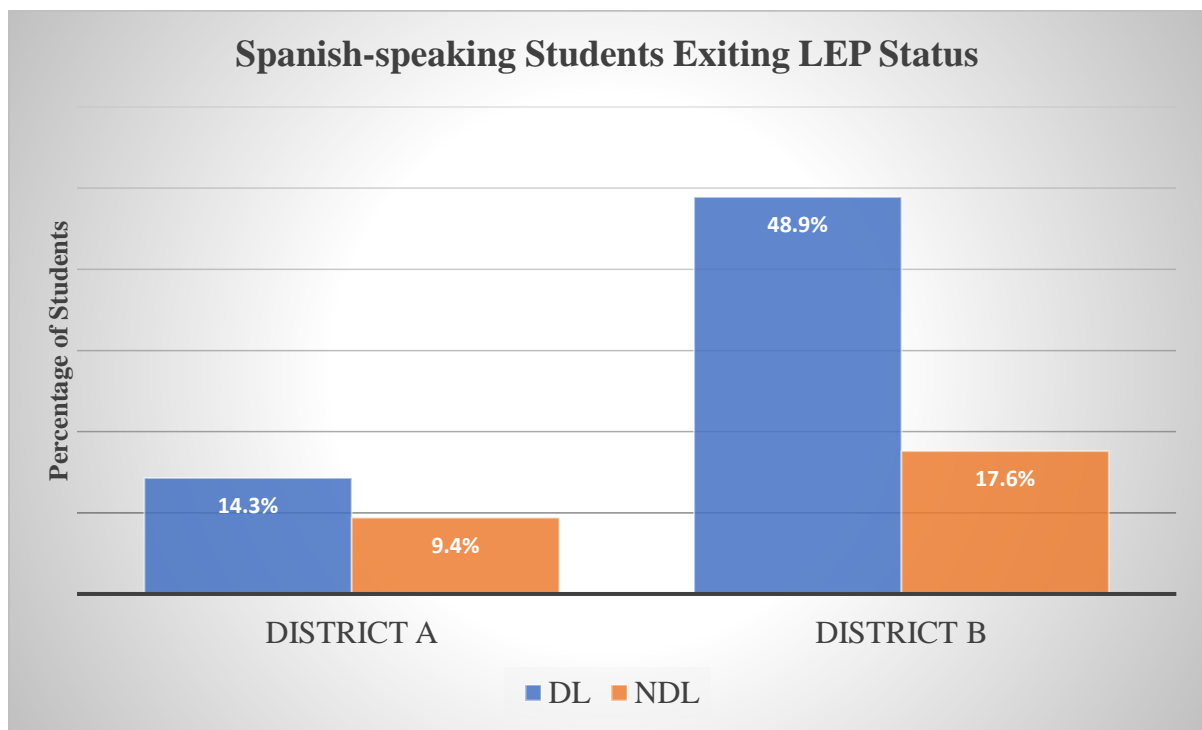


Figure 4.11. Percentages of SSLEPs from two districts' schools exiting LEP status.

Due to the numbers of students and smaller difference in percentages, this data was not statistically significant ($p>0.05$). The percentage of DL versus Non-DL SSLEP students exiting from District B showed a much bigger difference and statistical significance ($p<0.05$),

with 48.9% of DL students ($n=111$) exiting LEP status within the four years and 17.8% of Non-DL students ($n=13$) exiting LEP status.

Comparison or integration. It is important to recognize that the exit data corresponds to the Reading EOG data in both of these districts, though varies by proficiencies. In concurrence with the study conducted by Thomas and Collier (2009-2011), the exit rate data supports their conclusions that LEPs in DL fare better in school than those not enrolled in DL. Another important factor to consider when analyzing the data is the small numbers of students included in the data sets. There were 245 Non-DL Spanish-speaking students in District A and 74 Non-DL SSLEPs in District B who were not enrolled in the TWI programs. There may be varying reasons for why these Spanish speakers were not involved in the dual language program which may have affected the outcome. Confounding variables such as economic disadvantage, learning disability, and parental influence could also be considered as potential reasons for the inability to exit their LEP status.

Other Notable Findings

Several additional concepts derived from in-person interviews of district and school-based DL administrative personnel which were repeated by multiple participants and are worth noting as additional findings. These elicited pertinent messages for the establishment and maintenance of a dual language program and should provide insight for districts considering potential future program adoption.

The dynamics of building a DL ‘school within a school.’ Establishing a TWI program is complex and takes many years to develop into an effective program. Some of the reasons reported for this were: the number of years it takes for a program to evolve across the entire school; establishing interest in the program in the community; the environment created

by the leadership at the schools; and the knowledge and experience of staff supporting the program. Also noted as critical to the process was the ability to garner public support and understanding of the academic and emotional challenges students face when enrolled in dual language versus traditional classrooms. Both district and principal insights were shared regarding the many challenges faced when building a dual language program within a traditional school.

The majority of TWI schools in this study were programs established within the setting of a traditional public school. For those schools, the number of students and classes offering the dual language option was driven by the demographic need of Spanish-speaking students and the desire of English-speaking parents interested in enrolling their children in the program to learn a second language. This resulted in most schools housing two to four classes per grade level, all of which began with a single cohort of kindergarten students. As the programs evolved, each year another group of kindergartners would enter the program, and by the sixth year in the process a percentage of the school population would have DL classes in kindergarten through fifth grade. It was noted that, at the start of the program there is only one grade level to accommodate with curriculum, teachers, and Spanish resource, but by the sixth year into the program this need increases exponentially to include every grade level in the school. Being able to adequately support the program as it grows is critical to it being successful. A district program coordinator said that they have learned over time to “set up 3-year strategic plans before beginning any new cohort so that we can budget accordingly and develop the resources that will be needed as the program grows.” They advocated that districts need to stay involved at every level of the process, make administrative changes as needed, conduct regular meetings with the DL principles, and assure that the teachers and

coaches have enough knowledge of how to teach within the framework of the biliteracy model established. In a district where the program expanded quickly due to interest in the community, a former DL principal now serving as a district coordinator concurred by saying,

When we started out it was every school doing their own thing, but as the programs grew we realized that there had to be a specific formula we were using in all of the DL schools to be effective as a district.

As community awareness of the programs grew, so did the interest. In many cases this led to larger cohorts of students and often resulted in the need to create a waiting list due to limited resources to adequately house the TWI classrooms. Several districts reported that they had English-speaking families on a waiting list for the past four to six years due to the increased interest in the program. Others shared that they had Spanish-speaking students who they could not accommodate due to the balance of native Spanish- and English-speaking students needed to create the immersion of two languages within the classrooms. The evolution of the programs may also be influenced by changing demographic needs. One elementary school DL coach reported, “We currently use a 50-50 two-way immersion model, . . . but have done a one-way 90-10 model in the past due to demographics or the needs of the students.” Another district reported that they had a difficult time getting enough English-speaking students enrolled to create the desired balance of the two languages. “Parent buy-in is critical if you want to operate an immersion program . . . and educating them is the responsibility of the principal at each school,” affirmed a district program director. Strong, supportive leadership was noted by many participants as a key factor in the success of their schools’ TWI programs.

Challenges of dual language program implementation. There were many challenges regarding developing and maintaining a two-way immersion program reported by administrators and teachers within this study. Program design, accountability, curriculum and

instruction, and the development of both languages were noted as primary concerns by administrators in all three districts. Other comments on challenges faced in TWI program implementation noted limited resources, both human and fiscal, and having the curriculum and materials to adequately apply the programs with fidelity to benefit the students enrolled.

Careful development of programs prior to implementing them in schools was noted by two of the three district representatives, and all three districts discussed the many years of evolution the programs had undergone since their inception. Continuous efforts to improve the structure of their programs and the delivery in the classroom caused practitioners in the study to face constant changes and revisions to develop best practices for teaching biliteracy. “We are still trying to figure out what the best ways to actually ‘do’ dual language really are,” stated a dual language coach in one district. “Some of the schools are doing it one way, and we are doing it another way.” It was also noted that leadership can play a critical role in a district-adopted program in order for the program to be successfully implemented. Another district’s leadership team agreed that not only do program directors need to have knowledge of the research out there about dual language, but principals and teachers need to be well trained and knowledgeable about the programs before they can effectively operate a TWI program. One district director reported that, “We used to put anybody who was interested in working in DL in there because we couldn’t find enough people . . . now we know that they need to have knowledge and preferably some experience with dual language to be successful.” To adopt a dual language program, districts must spend a great deal of researching, planning, and training to properly develop and implement the models that will work best in their schools.

Also highlighted by all district-level participants was the difficult nature of accountability for the students in the TWI programs. A district data manager stated,

One of the problems in our DL program is that there is a lot of transitioning [in and out] of our Spanish-speaking ELLs . . . By the time the students who began the program in kindergarten reach the state testing grades, there number of them left are small so it is challenging to track success.

Another district coordinator voiced, “Our program has not been very effective in collecting student data from the DL schools.” Also noted by every principal in the study was the fact that ELL students in their DL classrooms develop proficiency differently than students in a monolingual program. “They are trying to develop literacy skills in two languages, and it sometimes takes them longer to show proficiency on standardized tests,” said a principal with many years of experience leading TWI schools. Also noted by administrators and teachers alike was the difficulty and importance of communicating these differences with parents. Many stated concerns that if parents did not fully understand the program, the inability of their non-English speaking student to pass English reading assessments during elementary school may cause them to pull their children from the programs. The most seasoned administrator interviewed in the study proclaimed that this was an important consideration by stating, “If parents are not educated about the challenges of the program, they may not feel comfortable leaving their children enrolled in them.”

The development of curriculum was a constant theme throughout the study, noted by every level of participant as a difficult part of building their TWI program. Difficulty in teaching literacy in two languages simultaneously while attempting to meet the standards for both English and Spanish resounded across all three districts, who claimed to have begun their programs duplicating lessons in both languages. “The time it takes to effectively teach the literacy standards has to be split in half and shared between both languages,” stated one

program coordinator, “otherwise there is just not enough time in the teaching day to get everything in!” Many teachers also reported the lack of time as a problem. One comment on the questionnaire regarding duplicating the lessons was, “Native English speakers would not listen during Spanish because they knew they would get the same [lesson] in English!” This issue prompted several districts to share the standards and not reteach everything in both languages. “In order to do it right, a rigorous curriculum framework needs to be allocated across both languages,” shared one program coordinator. Dividing the instruction by grade level, by subject, and language, and bridging the languages at the end of every unit was reported as their best dual language curriculum model to date.

A similar version of this model was being used in another district with reported success. The lack of authentically translated materials was also a primary concern for school-level educators working in the classrooms. Having enough materials in Spanish was seen by a TWI literacy coach as “a commitment to the program which makes teaching literacy across the subjects much more accessible for teachers.” Curriculum mapping for dual language was noted as a new phenomenon in several districts and was viewed as a time-consuming process but well worth the effort by all involved. One curriculum coach stated, “Even though we’re at the beginning stages, curriculum writing is going to be huge,” highlighting that it promoted collaboration, thoughtfulness, reflectiveness, and built trust between the DL and traditional classroom partners.

Summary

This study was conducted with the participation of eight schools within three districts in North Carolina that operated dual language TWI programs for Spanish-speaking ELLs. The demographics of these schools varied, but there was a commonality among the Spanish-

speaking students enrolled in the programs that they were primarily from educationally disadvantaged subgroups identified by low socioeconomic status. The program models being used varied within the two-way immersion methodology based upon the percentage of the day in which the target language of Spanish was being taught. This became more consistently a 50-50 model by second or third grade across all schools in the study. Administrator and teacher demographics showed that teachers had far less experience working in a dual language setting, while administrators had an average of almost twice as many years of experience working with DL programs.

The study used a mixed methods approach to collect the data, which focused primarily on the qualitative findings and sequentially added quantitative findings during the second phase. The qualitative data were used to address specific strategies being used by districts, schools, and teachers to promote the literacy proficiency for Spanish-speaking ELLs enrolled within the TWI programs, while the quantitative data were collected to see if the information uncovered during Phase I resulted in improved proficiency scores on NC standardized assessments for literacy. The primary research question asked, “How do these established TWI programs currently employed in NC promote the literacy proficiency of Spanish-speaking LEPs?” This was the most important target of the study, to uncover “what” these methods were, and “how” these methods were working. Subsequent questions addressed included, “What specific strategies were they using which were associated with the greatest success within the TWI programs for Spanish-speaking?”; “How did the TWI classroom teachers describe and rate the most successful strategies that promoted student proficiency in literacy in their classrooms?”; and “Is there consistency across different

programs to validate these findings?” Specific answers related to each of these questions were outlined through use of their corresponding findings.

A majority of the participating schools employing TWI programs in NC resulted in promoting the literacy proficiency of Spanish-speaking LEPs through the use of several strategies and practices. All three districts used assessments to measure student proficiency in English and in Spanish to identify if their programs were effective, and each had created their own assessments for Spanish literacy as there are no common measures adopted by the state. Summative assessment scores showed consistent growth for TWI students, and even greater proficiency levels as they moved into middle school. Vocabulary development was the most highly valued strategy across all schools, and the use of oral language development, or the emergent ‘oracy’ strategy, and a study of cognates between the two languages supported the development of their classroom applications. Two of the three districts were strong proponents of content-based instruction, which integrated curriculum and language standards and applied the strategy called ‘bridging’ or a more explicitly planned lesson at the end of units called ‘the bridge’ to support content knowledge retention in both languages. Dual literacy instruction was also identified as a key component of a successful DL program, though comments voiced regarding the effective delivery of this strategy included teacher experience and staffing issues across all districts.

These findings also addressed the secondary research question regarding specific strategies that yielded the most success for SSLEPs on NC reading End-of-Grade tests. The strongest ratings for the use of these strategies and professional development support came from the two highest-scoring districts, while the district without DL program initiatives who did not support most of these strategies scored far worse. Staff professional development was

highly valued by all study participants but was only supported by two of the three districts, which seemed to have an impact on the effectiveness of the programs. The two districts with the strongest professional development scored far higher on average scores and proficiency rates than the district without explicit professional development for DL staff. The one district that did not focus on a strong dual language professional development fared the worst across the study. Further findings may indicate an even stronger connection to the amount of time and resources invested into the programs at the district level, which showed the highest rates of success in literacy proficiency by the district with an explicitly developed, long-term, district-wide PD for all professionals working in DL schools.

Teacher participants had a great deal of input regarding the most successful strategies they were using in the classrooms to promote literacy proficiency. These responses were anonymous by district, and their input was collected using a questionnaire. Teachers rated vocabulary development and total physical response as the most highly effective strategies being used in their classrooms, with small-group literacy instruction, oracy, content-based instruction, and dual literacy also rated as highly effective by over half of all teacher participants. Professional development was also rated as highly important, but the overall effectiveness and availability of the professional development they received varied across the districts. When asked to describe the strategies that they used most often in their classrooms, over 50% reported the use of vocabulary development, oracy, and content-based instruction as ‘always’ being used in their classrooms, with 90% or more using them always or most of the time to promote literacy proficiency. Other benefits were reported by teachers to include higher cognitive processing skills, strong collaboration, higher engagement levels, and risk-taking being exhibited by their DL students. The benefit that was rated as the greatest

measure of student success by 96% of teachers was the sociocultural benefits students gained from being immersed in the dual language programs. Teachers also reported several challenges to teaching in DL, including the amount of time teachers must commit to the process of learning how to teach in DL, the limited resources available in the target language to support the curriculum, issues related to training and maintaining strong DL staff members, and district support for the development of the programs.

The consistency of the TWI programs within two districts was relatively strong but varied greatly between the three districts and from school to school based upon district and administrative support. Findings that addressed this question included the district environmental benefits, which supported the notion of an explicit district-driven vision and mission for the DL programs, the development of knowledgeable leadership to promote an environment for success and efficacy of the program delivery, and the added value of building a strong, collaborative network across the DL schools in the district to further support teachers and staff as they develop their practice. Additional findings also identified the difficulties of operating the ‘school within a school’ model of TWI, noting that administrators have a great deal of influence on the creation of a supportive school environment and the development of knowledge to support all stakeholders within the school community. Also relative to this question was the finding regarding best practices, which identified three strategies being used in the most successful schools including vocabulary development, content-based instruction, and small group guided reading. The emergence of two previously unidentified strategies referred to as ‘oracy’ and ‘bridging/the bridge’ were also being used in the two districts which exhibited the greatest success, and these strategies were not identified as effective or being used by the third district participants.

The analyses of reading assessments and proficiencies painted a vivid picture to address the research questions and concurred with prior program validation for two of the three districts. Relative to student success were specific strategies being used, the support from district and school initiatives, and additional benefits derived from the placement in dual language programs. A positive relationship was derived from the differing findings across the three districts, which showed strong support for the use and application of the identified strategies and practices used in the most successful programs and will be further discussed in the concluding chapter of this study.

Chapter 5

CONCLUSIONS AND DISCUSSIONS

Introduction

This final chapter includes a summary of the pertinent results and knowledge gained from the study. Conclusions drawn from the research were used to answer the primary and secondary research questions: “How do established TWI programs currently employed in NC promote the literacy proficiency of Spanish-speaking LEPs?”; “What specific strategies being employed are associated with the greatest success within the TWI programs?”; “What strategies do classroom teachers describe as the most successful for promoting student literacy proficiency in their classrooms?”; “Is there consistency in the structure and application of TWI pedagogy across different programs to validate these findings?”; and “Do the quantitative data support the qualitative findings from the interview and questionnaire data?” All findings and conclusions are then summarized, and other notable findings are reviewed. Reflections regarding a correlation to the literature reviewed in Chapter 2 follows, including support from the study which confirms or refutes previous research findings. Connections to the conceptual framework are included for its analytical lens and how it affected the study outcomes and answered to the research questions. Finally, advice for practitioners in the field of education either working in or considering the adoption of a dual language education program is offered, along with several recommendations for further research to be conducted on dual language two-way immersion programs.

Conclusions

This study was conducted within three districts on eight dual language two-way immersion programs across North Carolina. Results were presented in Chapter 4 (see Table 4.2) and are summarized with conclusions drawn to show what these findings yielded.

Finding 1

Many assessments were used to measure student success in both languages, but state-mandated annual assessments were conducted only in English. Districts used many different measures to assess student literacy skills and each created their own assessments for Spanish language proficiency. Performance of students enrolled in these programs was reported by interview participants to show consistent growth on summative assessments and was identified as a key component of TWI program evaluation.

Conclusions: From this finding, several conclusions were drawn to include:

- A. The use of assessments to measure student success in the DL immersion programs was common across all districts.
- B. To what extent the proficiency scores of students in the TWI programs drove district decisions regarding the continued application of DL methods varied, but notable improvements were obvious in those districts who collaborated across schools.
- C. The lack of consistent and high-quality assessments for Spanish language proficiency makes it difficult to determine if biliteracy is being developed.
- D. A comparable assessment to state-adopted English assessments to measure literacy skill proficiency in Spanish would improve consistency in measuring program effectiveness.

Finding 2

Benefits were reported in districts where the DL programs were driven by an explicit mission and vision. Strong, knowledgeable, and effective leadership was identified as a critical component in developing an environment for the success of DL programs in the schools. Increased collaboration across the schools and districts during professional development and curriculum planning was noted in two of the three districts as critical for programmatic success, and the resultant risk-taking atmosphere promoted support across the school communities.

Finding 3

Students enrolled in the TWI programs received many additional academic benefits through participation including higher cognitive processing skills, strong collaboration skills, and increased engagement in learning. These added benefits to program participation directly address the conceptual framework of LatCrit theory in the study which focused on providing Spanish-speaking LEPs (SSLEPs) with a more equitable and socially just education in the public-school setting where their native background is honored. In the TWI environment, Latino/a students are embraced, and their language and culture are regarded as equally important to their education as are the dominant English language and American culture.

Finding 4

Sociocultural benefits were rated as the highest measure of student success in the program by 96% of teachers in the study and reported by district and school-level administrators as elemental reasons for the programs being so successful at educating the entire learning communities. The development of multicultural awareness, respect for differences in people, and social habits supporting the inclusion of peers from both languages

were noted in support of this program benefit. Socially just and LatCrit sensitive pedagogy was notable in the high level of responses regarding the success of students in the program being measured exclusively by these benefits.

Conclusions: Combining the findings regarding additional academic benefits, district environmental benefits, and sociocultural benefits yielded the following conclusions:

- A. Dual language programs offer many benefits other than improved assessment scores to the students enrolled in them and the learning communities they support.
- B. Cognitive functioning is improved through use of dual language instructional practices, thus promoting a better education for all LEPs enrolled in TWI.
- C. Life skills such as communication, collaboration, and respect for cultural differences are highly developed in the process of learning in the immersion classrooms. This conclusion is enhanced by the inclusion of a conceptual framework focusing on the potential for DL providing socially just pedagogy.
- D. The environment created in schools by the TWI programs embraces Latino critical theory, affords Spanish-speaking students a socially just education, and improves multicultural awareness and collaboration across the entire learning community. Promoting academic proficiency for Spanish-speaking students is a primary focus of these programs and their needs are held in as high of regards as are their English-speaking peers. This LatCrit sensitive environment offers a solution to the problem of skin color and language-based oppression which have been experienced by Hispanic students in public education for decades.

Finding 5

Instruction focused on vocabulary development was strongly advocated by a majority of participants and highlighted the concept of oral language development, or ‘oracy,’ which emerged as a strategy specific to instruction in the development of two languages. This practice was noted as a critical component of dual language programmatic success, yet implementation in the classrooms varied in style and frequency. The development of teacher skills to effectively implement oracy within the framework of dual language literacy instruction provided great enhancements to TWI teaching strategies and promoted biliteracy for the Spanish-speaking LEPs enrolled in the TWI classrooms.

Finding 6

Content-based instruction was highly rated by practitioners at every school, and the emergence of ‘bridging’ the two languages as an extension to units of study was reported as a successful dual language practice. During lessons taught in either the primary language or English, this practice placed the native speakers in the role of language ‘experts’ and allowed them to become a resource for the other half of the students who are still learning the language. SSLEPs, therefore, were regarded as more well equipped to understand what was being taught when the content-based instruction was in Spanish, rendering them as a positive role model during instruction and lending itself well to a LatCrit sensitive theory. When instruction was in English, roles were reversed and students learning English then relied upon their English-speaking peers for support. This balance created a socially just environment for learning regardless of native language or culture. There were, however, limitations on adequate resources in Spanish noted by participants in every school, which made it more difficult to support learning standards and goals of biliteracy across all content areas.

Finding 7

Dual literacy instruction was rated moderate to highly effective by a majority of study participants. Compiling lessons to address the core standards for English literacy coupled with the standards for literacy in Spanish often created duplicitous lessons and a disconnect of student engagement from learning the same thing twice. To remedy this, many schools split the literacy standards between the two languages and have found that student who learn literacy skills in one language can relatively easily transfer those skills to the other language. Professional development on the application of this explicit DL strategy would serve to further promote its usefulness in the TWI classrooms. Challenges reported from participants who assigned moderate ratings to this strategy included limited teacher experience or qualifications for delivering instruction in TWI classrooms and high DL staff turnover.

Conclusions: These findings, which focused on the three successful strategies for teaching literacy in TWI classrooms, yielded numerous conclusions:

- A. Explicit vocabulary instruction in Spanish first, supported by a biliteracy curriculum framework, promotes literacy proficiency for SSLEP students enrolled in TWI programs.
- B. The use of the emergent instructional strategies of oracy and the bridging of content-based lessons from Spanish to English are key components to developing literacy skills in two languages.
- C. The use of ‘best practices’ in teaching are critical for dual language education, yet modifications to are required to meet the needs of ELLs in TWI. These practices look very different in DL and modifying them becomes critical to their success use in the TWI classroom.

- D. Biliteracy goals for each grade should be developed with the support of the district to promote consistency and effectiveness in program delivery.
- E. The knowledge and experience levels of administrators, coaches, and teachers working in dual language schools has an immense impact on the effectiveness of instructional delivery and the fidelity of TWI programs.

Finding 8

The use of small groups to conduct literacy instruction was highly valued by most study participants, though teachers rated the effectiveness of this strategy as moderate to low in promoting biliteracy. Support for these ratings were based upon the vast differences in how small groups for literacy instruction were being constructed and that the groups rarely focused on language during its use.

Finding 9

Heterogeneous collaboration was rated as moderate to lowest effectiveness for promoting literacy proficiency in LEPs. This strategy was not found to be commonly used across any district or school, and when it was being applied the collaborative groups were built primarily by reading or skill level, not by native or target language.

Conclusions: Findings on two ‘best practices’ which were not as effective in TWI classrooms yielded the following:

- A. Best practices in traditional education do not always mean that these same practices work well in a dual language setting. Both small group guided reading and heterogeneous collaboration were not only difficult to develop in a TWI setting, the practices of doing so require seasoned teaching skills to be successful.

- B. Adjustments to instructional strategies must be made before being implemented in TWI classrooms and should include considerations of both content and language objectives.
- C. When building curricular units, it is important to ensure that the lesson objectives are clearly defined and target specific goals for dual language learners.
- D. The amount of time it takes to cover both the core curriculum and dual language standards places limits on the ability of teachers to use some strategies.

Finding 10

Professional development was reported as being extremely important to the process of building effective dual language practices for TWI programs in the schools. The extent to which districts focused on building dual language knowledge and skills varied greatly, and teachers reported that most of their development on dual language practices was done through coaching before and after teaching observations.

Conclusions: Several conclusions regarding professional development to promote program effectiveness include:

- A. Extensive training on dual language pedagogy and practice is necessary before being placed into TWI schools and classrooms.
- B. Collaborative planning on units and lessons in schools and across districts promotes the effectiveness of TWI curriculum coaches and teachers and their ability to embrace the continuous learning required for their positions in a DL program.
- C. The immediacy of coaching teachers around observations of their practice is an effective method for developing skill sets in DL instruction. Building a

relationship between administrators and teachers which supports both their learning and their deficits in knowledge is critical to achieve positive results and improvements in TWI classroom practice.

- D. The continued professional development of school administrators and district leaders is as important as developing skill sets in classroom teachers. They become the resources from which teachers can draw to improve their craft.

Finding 11

EOG reading scores were analyzed for third- through eighth-grade students enrolled in the participating schools over the course of three school years from 2105 to 2017. Results of this analysis showed varied outcomes by school and district, but improved proficiency in reading for SSLEPs enrolled in TWI programs was shown in two out of three districts when comparing SSLEPs, especially in fifth through eighth grades. The same two districts had EOG reading test scores that showed statistically significant average scores of TWI Spanish-speaking LEP students which surpasses their peers not enrolled in dual language.

Finding 12

Language proficiency scores on the annual ACCESS tests for LEPs, which measure reading, writing, speaking and listening skills, were analyzed to evaluate program effectiveness for improving literacy skills for SSLEPs. Exit rates of students in the DL classrooms were compared to those not in the DL classrooms for two of the three districts, showing that the percentage of these students having strong enough proficiency in English to exit LEP status was higher for those enrolled in TWI than those enrolled in traditional classrooms for both districts, though only District B showed statistical significance.

Conclusions: Several pertinent lessons were drawn from findings of assessment data:

- A. In concurrence with current literature, dual language TWI programs promote literacy proficiency for Spanish-speaking ELLs.
- B. Practitioner perceptions regarding LEPS enrolled in their TWI programs outperforming their peers in literacy proficiency are confirmed.
- C. Spanish-speaking LEP students who participate in TWI programs for at least 3 years will likely achieve proficiency scores by 5th grade that are at or above their peers.
- D. Longitudinal data provided by two districts that followed TWI students' progress through eighth grade illustrated that students enrolled in dual language become even more successful in middle school.
- E. The collection of assessment data to measure student academic success is critical in determining program effectiveness.
- F. LEP exit rates increase for students participating in dual language programs.

Other Notable Findings and Conclusions

The Dynamics of Building a DL 'School Within a School'

As a TWI programs evolve and spans across all grades, its effectiveness as an educational model is viewed with greater scrutiny by stakeholders invested in the process. Study participants identified causal factors for program success, citing as most critical the environment created by district leaders and support from leadership at the school level.

Conclusions: Resulting conclusions drawn from this finding include:

- A. Districts must prepare for DL adoption by developing background knowledge and a strategic plan to support the program as it evolves.

- B. For schools to build an environment that supports the shift in pedagogy necessitated by TWI curriculum, its leaders must be knowledgeable in dual language practices.
- C. The experiences with dual language pedagogy and practice that a school administrator possesses can be critical in supporting the needs of their staff and the need for professional development.
- D. To create an environment that fosters the values inherent in dual language methods, administrators must be able to effectively develop practices that result in all members of the school community embracing the TWI program.

Challenges of Dual Language Program Implementation

It is important to consider the many challenges of adopting a TWI program. Every district- and school-level administrator reported challenges and offered advice from their experiences implementing dual language programs, and many teachers supported this notion through comments regarding difficulties experienced in the classroom. The most noted challenges shared by administrators in all three districts included difficulty in program development and program design, student accountability, building curriculum and instructional practices, and the adequate development of both languages. The themes regarding difficulties in program development concur with a 3-year study conducted by Lindholm-Leary (2012) which highlighted some of the same issues. One of the more seasoned program directors stated that

if any district wants to implement a DL program, they first should spend a few years developing their program design, and then go into their first year of implementation with everyone well trained . . . otherwise the program could fail.

Other comments on challenges faced in TWI program implementation noted limited resources, both human and fiscal, not having the curriculum and materials necessary to

adequately apply the programs and creating practices that support the staff in delivering instruction with fidelity to benefit the students enrolled.

Conclusions: The following conclusions were yielded from this finding:

- A. Conduct a meta-analysis of literature on the specific programs under consideration to ensure that the model is the right fit for the district.
- B. During program selection, consider the demographics of the community, primary languages of LEPs in your district, and the human and fiscal resources available to support the initiative.
- C. Develop a strategic plan which spans the number of years needed for full implementation of the program and includes at least one year of planning and development prior to program implementation.
- D. Carefully consider the fiscal resources needed to support the development of the program as it progresses from year to year. The annual budget should be enough to supply schools with second language materials in every classroom across all content and professional development for all of staff working in and supporting the program.
- E. Consider hiring experts in the field of dual language education to guide training and implementation during the formative years of the program.

The Categorization of the Subgroup LEP

North Carolina uses EOG scores to measure student and school success by determining if the ‘achievement gap’ between LEPs and their English-speaking peers is narrowing. It was repeatedly mentioned in participant interviews that this subgroup identified by the state as LEP is unlike other subgroups; it is finite, defined solely by a student’s ability

to be proficient in academic English. The use of ACCESS testing to measure English proficiency for LEPs is used exclusively while students are a part of this subgroup. Once they exit their LEP status by scoring high enough proficiency on the test, they no longer are tested on the ACCESS test, so measuring the continued growth of English proficiency is limited. During the course of this study, students who had exited LEP status were no longer included in the LEP subgroup, thus eliminating the potential increase which may have resulted from greater proficiency. The new Every Student Succeeds Act, which became effective in the 2017-18 school year, has identified the classification of exited LEPs as Monitored Former English Learners (MFELs), and provided for their inclusion in the LEP subgroup for four years after their exit (North Carolina Department of Public Instruction, 2017). While this is better than eliminating them from the subgroup upon exit, it remains critical for consideration that the proficiency scores for many who have exited will not be credited to the LEP subgroup.

Conclusions: This finding yielded several conclusions:

- A. Comparing LEPs to a subgroup based upon race whose students remain part of the group throughout their lives, their scores will always be included in the assessment of the subgroup's achievement; LEPs who become proficient at any point in their academic careers will not have their scores count infinitely towards the LEP subgroup.
- B. The achievement gap between LEPs and English-speaking students will never be closed because as LEPs become proficient they are not included in the subgroup after four years, and instead they become part of the higher performing English-speaking majority.

- C. If we truly want to measure whether the achievement gap is closing, then MFEL students need to be included in the LEP subgroup for the rest of their academic careers after they exit LEP status. This would allow LEAs and the state to see the actual growth in promoting LEP proficiency in literacy, as well as all other subject areas, which are achieved throughout the education of students who began as English learners in our schools.

Discussions

Several areas of this study were developed from current literature on dual language and two-way immersion research, and then were reported during the process of the study resulting in findings and conclusions. The focus of these reflections can be found in discussions regarding the following areas: TWI program structures and resulting student performance; strategies used within the TWI framework including a focus on biliteracy; the important role that professional development plays in effective TWI pedagogy; the conceptual framework of a socially just education using LatCrit theory as a lens for this research; and the use of assessment data in evaluating program effectiveness.

TWI Program Structure and Student Success

There was strong consensus among the participating districts regarding the use of assessments to measure students' success in TWI programs to validate the academic success of Spanish-speaking students. District program coordinators all agreed that students, regardless of background, native language, or disability experienced increased academic performance on literacy assessments from participation in dual language two-way immersion classrooms. From their 7-year study of Hispanic ELL students in TWI programs, Lindholm-Leary and Genesee (2010) concluded that they performed at or above their mainstreamed

peers on English assessments and performed above them on tests of proficiency in Spanish. Further evidence supporting this conclusion from other studies includes a review of 293 studies published in peer-reviewed articles which found that TWI promotes academic achievement in both native and target languages (August & Shanahan, 2006), a comparison of dual language and English-only programs showing 12 out of 17 studies which favored bilingual approaches to teaching reading (Slavin & Cheung, 2005), and a 5-year study on the performance of 700,000 language-minority ELLs in dual language that showed those in the DL program took three years less to become proficient in English (Thomas & Collier, 1997). There is much evidence in support of the effectiveness of dual language programs, and the findings in this study concur.

Not only is literacy proficiency improved, but there are many additional benefits to participation in TWI programs. A synthesis of research on TWI practices conducted by Lindholm-Leary (2012) highlighted that both ELLs and native English speakers develop high levels of proficiency in two languages, and the benefits extended to students from diverse cultures, low socioeconomic, linguistic, and special needs backgrounds. Also noted by several interviewees was the notion that students develop higher cognitive processing skills, which allows them to perform better on tests, be strong collaborators, and use high-order thinking skills such as evaluation and synthesis to solve problems and address a challenging curriculum in school. There are scientific studies to support the idea that increased synapses occur in the brain while students learn academic content in two languages at a young age (Alanís & Rodríguez, 2008; Lindholm-Leary, 2005; Oliveira & Ançã, 2017). It is confirmed from the findings in this study that practitioners and researcher alike have found dual language and TWI programs to be highly effective at teaching all students enrolled and at

promoting their academic success in many areas. This positively answers both the primary research question and a secondary question regarding quantitative assessment evidence to support the claim of effectiveness for dual language TWI programs.

TWI Strategies and Biliteracy

To identify the strategies being employed in the TWI classrooms in this study that were most successful at promoting academic proficiency for ELLs, a review of the literature identified several teaching practices that were being used in DL schools (see Table 2.4). Noted by current studies was pedagogy that pointed the way to be included in the construction of a TWI program, but the literature was limited regarding an actual list of ‘best practices’ explicitly for DL and TWI schools. Five teaching strategies were highlighted by researchers including small group literacy instruction, dual literacy, content-based instruction, vocabulary development, and heterogeneous collaboration. Other strategies emerged during interviews with district administrators which included oracy, bridging, the use of visual and physical response learning strategies, and curriculum mapping.

Two strategies which were confirmed by all study participants as most effective in delivering instruction in the TWI classrooms included vocabulary development with an oracy component, and content-based instruction using bridging to connect content learning in L1 to L2 through a study of targeted vocabulary and cognates. It is important to note that these strategies had been modified to fit the unique sets of needs of ELLs in order to be effective in the DL setting. This finding concurred with Wong-Fillmore and Snow (2000) who noted the importance of developing oral and written language and having strong components of academic English in vocabulary instruction for ELLs. Echevarria, Vogt, and Short (2008) discussed the use of strong language development programs which include literacy in both

languages, making grade-level content accessible to students, which was also concurred by this finding.

What was reported in the statistical ratings as most effective strategies and what teachers reported as actual practice in the classrooms revealed that the vocabulary development strategies being used varied greatly from classroom to classroom, and that few schools had an explicit vocabulary curriculum. The intended strategy applications discussed in the interviews and the actual practice of teachers were sometimes very different. When used as prescribed, vocabulary development, coupled with the emergent strategy focusing on oracy, supports the notion that the practice of vocabulary development modified to apply to two languages in DL programs promotes Spanish-speaking LEP proficiency in literacy. The use of content-based instruction was also rated highly by two of the three districts when coupled with the emergent strategy of bridging, and its use produced successful promotion of LEP proficiency in TWI classrooms. Relevant findings reported in the quantifiable sets of data collected from study participants confirm the use of both strategies, yet the qualitative data revealed some potential discrepancies challenging the results of what was reported in the statistics and what may actually be practiced in the classrooms.

Several other strategies were rated as less effective in TWI instructions. Dual literacy and the use of visual aids such as anchor charts in both languages were reported to be better in theory than in actual practice. Cech (2009) was a strong proponent for the use of dual literacy with WIDA supported strategies including total physical response, or TPR, and visual aids offering students a tangible understanding of both languages. Comparing the different responses from the teachers to those from administrative roles it appears that the concept of dual literacy is more positively viewed by administrators than by those actually

putting it into practice in the TWI classrooms. Some of this disparity may be explained by comments regarding the difficulty of unpacking the core curriculum standards and allocating them to two different languages.

Curriculum mapping explicitly for biliteracy in the TWI classrooms was reported to be in the early stages of development for most schools in the study. It received mixed reviews, being lauded as the key to success by one district, in its first year of planning by another, and was regarded by participants from the final district as a missing link in their program. Small group literacy instruction and heterogeneous collaboration were both identified as having low effectiveness in immersion classrooms. Reasons reported to refute claims regarding the use of these strategies included the lack of focus being placed upon language proficiency, the difficulty of implementation due to time constraints on teachers from teaching literacy in both languages, and a lack of supporting materials in content areas. In many traditional schools across the state, these practices are staples to literacy and content-based instruction in English, yet the time and construct issues facing teachers in the TWI classroom to build curriculum which addresses the modifications needed to teach dual language learners limited its use in all three districts, thus refuting these as effective strategies for TWI.

Another interesting finding that resulted from the data collection on strategies was teachers' ratings on the overall effectiveness of teaching reading, writing, and speaking for both English and Spanish. These ratings revealed scores that were much lower for their success in teaching these literacy skills in English compared to how effective Spanish literacy instruction was rated. Several causal factors to consider regarding this include the number of participants reporting to teach in the primary grades, which focus primarily on

Spanish literacy, were much greater than the number of questionnaire respondents teaching in intermediate or middle school levels, and the results may have been influenced by the large number of Spanish-speaking teachers who participated in the study. While the primary language spoken by the questionnaire respondents was not an inquiry made regarding teacher demographics, a large majority of the TWI teachers invited to participate had last names that were Hispanic.

Finally, refuting claims of program effectiveness may be influenced by participant reports which noted several important factors to consider: many programs have yet to be fully developed; the time and resources available to adequately teach all of the required curriculum is an extremely difficult task; and it takes a number of years of experience working within the dual language framework to develop TWI instructional skill sets. Three of the schools in the study were in their fifth year of the process, and one was in its sixth. None of these schools had full sets of EOG test data since their first cohort had reached only third grade by the 2017 school year. Demographic data also showed that teachers had a much lower average number of years of experience in DL than administrators, which supports the notion of the novice teacher needing more time to develop their pedagogy and practice.

Importance of Professional Development for TWI Practitioners

The importance of professional development for practitioners in dual language TWI programs was evident in every part of this study. Theoharis (2009) supported strong teacher professional development (PD) that included ongoing and intensive training as a key component in changing the way schools meet the needs of marginalized students. The three districts in the study had developed very different approaches to continued education for their TWI staff: one of the three districts had developed a supportive system of PD explicitly for

teachers in their DL programs; another offered some training with much of it being school-based, and the other district provided limited opportunities for TWI teachers to learn about their programs and to develop skills for administering an immersion program. Teacher participants confirmed these levels of support and comments from many teachers from the two latter districts stated the need for increased support and PD on dual language instructional practices. Lindholm-Leary (2012) stated in *Success and Challenges in Dual Language Education* how critical it is for successful implementation to “provide professional development around the DLE [dual language education] model and second-language learning strategies” (p. 269). The most professional development teachers reported to be receiving was through coaching by administrators, coaches, and peers. Current literature supports the coaching model as effective PD and for providing teachers with experiential opportunities to be engaged in actual teaching (Darling-Hammond, 1998; Lindholm-Leary & Block, 2010). The qualitative responses concurred on PD as critical to their success in delivering effective TWI pedagogy.

A review of the EOG scores in each of the districts provided a pertinent observation: the district with the most structured PD reported TWI students receiving the highest scores consistently above their LEP peers not in the programs, while students from the district with little PD received the lowest scores with many of their TWI grades performing below their non-DL LEP peers. This quantitative analysis highlights the importance of professional development for establishing a successful DL program, yet it remains inconclusive regarding the effectiveness of professional development on programmatic success. The findings regarding differences in levels of professional development refutes the secondary research question regarding consistency across TWI programs, though may be validated by the

concurrent differences in scores for districts with strong PD programs compared to the district which failed to provide PD for its TWI staff having the lowest scores in the study.

Equitable Education for Spanish-speaking ELLs

The conceptual framework of this study focused on programs that had the potential to deliver strong pedagogy to the marginalized group of Hispanic learners in our English-majority public schools in North Carolina. It centered around notions of providing equity in education through Latino critical race theory and socially just practices that embrace the differences in learning style presented by Spanish-dominant student populations. Jenlink (2009) affirmed in *Equity Issues for Today's Educational Leaders: Meeting the Challenge of Creating Equitable Schools for All* that schools should provide pluralistic goals for English learners which affirm their language and group rights. These include the concept of not forcing assimilation into the majority English language and culture on ELL students. In adopting programs to support biliteracy and the development of students' Spanish literacy, each of the eight schools in this study aligned their programs to be equitable and socially just. With Latino students being identified as the most segregated group of students in the U.S. (Gándara & Aldana, 2014), these TWI programs were designed to offer a strongly inclusive environment for Spanish-speaking students. According to Scanlan and Palmer (2009), DL immersion promotes social justice goals, cross-cultural appreciation, and academic success for Latino students, which allows the findings in this study to concur with current literature and would preclude that the conceptual framework is inherent in these programs. While practices in place in each school may alter the effectiveness of the DL model in regard to delivering an equitable and socially just education, the respondents within this study clearly supported the notion that their programs were providing the best opportunity to excel in

academics for their Spanish-speaking populations. The environment created in each school received different levels of support and authenticity, however, and was driven by how intensely district and school leadership embraced the tenets of the dual language program.

An important reflection on leadership must be made, though it was not intentionally included in the established goals of this paper. Every principal in public education has the ability to establish a unique environment in their schools which can greatly impact their programs. This influence may be either positive or negative, yet schools persist despite their success or failure and North Carolina continues to be one the lowest performing states in the country. Dual language schools have the potential to improve how we teach the growing population of Spanish-speaking students in our state and can foster environments which support equitable practice and socially just tenets for the Hispanic population in the communities. This takes tremendous time and effort; therefore, school principals must be dedicated to their DL programs and willing to learn not only dual language methods, the biliteracy curriculum and the traditional curriculum, but also how to create a LatCrit environment that supports the differences in their student population. The ability to collaborate across the district and with their teams, teaching as a model, and fostering collaboration across the school community is also critical. They must have a commitment to professional development for their TWI staff to fully equip them with the necessary skills for success in teaching biliteracy. Being excellent communicators will also allow principals to educate families about the challenges and differences of dual language education and to promote the program to its stakeholders. Most importantly, school leaders must be able to foster an environment that embraces the benefits of the immersion program throughout the

entire school, building a collaborative team that embodies both the TWI and traditional programs.

Assessment Data to Evaluate Program Effectiveness

Assessment scores are intentionally being reviewed last for two reasons: first, the focus of this mixed methods study was placed upon the “how” and “why” these TWI programs were working to promote student literacy; therefore, the discussion is also directed in the same manner. Second, so many studies of dual language in current literature focuses almost entirely on the outcomes of reading assessments scores that the big picture of how that is being achieved is often omitted. The relatively small sets of data that remained from students who had been filtered out based upon limited time in the TWI program provided some interesting information to this study. The academic achievement gap between ELLs and English-speaking students has been clearly defined by the NAEP (2015), the National Clearinghouse for English Language Acquisition (2015), and the North Carolina Department of Public Instruction (2015), which shows consistent gaps spanning back over the past 20 years. Progressive research on DL programs in the last 15 years has begun to highlight issues that arise in the education of ELLs, specifically focusing on the potential for improved achievement outcomes (Chen & Yildiz, 2010; Collier & Thomas, 2009; CREDE, 2006; Darling-Hammond, 2012; de Jong, 2010; Fortune & Tedick, 2015; Goldenberg, 2010; Li & Edwards, 2010; Lindholm-Leary & Genesee, 2010; National Literacy Panel, 2006; Slavin & Cheung, 2005; Thomas & Collier, 2010, 2012).

Clear results from the literature review indicated that DL programs across the country are effective in promoting literacy proficiency for ELL students, and a vast majority of studies concluded that they outperform their peers not enrolled in dual language. Results of

the data analyses on End-of-Grade reading tests and LEP exit status determined by ACCESS test proficiency scores conducted in this study concur with these findings. These analyses also concur with research from Thomas and Collier (2009, 2010, 2011) conducted in North Carolina, which included the districts in this study, that these findings are more accurate once students reach fifth grade, and that EOG scores and the exit status of students in third and fourth grade were not found to be consistently higher. The findings by De Jesus (2008) that by year four in the DL program ELLs outperform peers on state reading tests is refuted. This data analysis supports the secondary research question regarding the use of assessment data to confirm the reports of success for LEP students in the TWI programs on improved literacy proficiency.

Suggestions for Practitioners

Several repetitive themes emerged from this study regarding how to promote the effectiveness of two-way immersion programs in public schools. These included most notably: knowledge and commitment needed for program adoptions; development of strong, knowledgeable DL leadership, the need for improved professional practice for teachers; the development of dual language ‘best practices’ for TWI classrooms; and highly visible collaborative and culturally aware learning communities. The following recommendations are based upon both positive and negative experiences reported which may benefit practitioners by their inclusion in this study:

- A. **Become educated on DL before adopting a program.** Spend years building knowledge regarding dual language: the types of school models; studies on model effectiveness; selection and design of the programs; the pedagogical shift that comes with its adoption and the sociocultural adjustments that will need to be

addressed; professional development for staff; and the challenges faced in implementing dual language programs in schools. After the adoption committee agrees, choose the program model based on student demographics and resources available to accommodate the selected model. Be sure to educate school leaders, curriculum coaches, teachers, parents, and students about the changes that will take place with program implementation.

- B. **District-level involvement is critical.** Districts must be prepared to provide long-term explicit support to educators working in DL schools for programs to be well implemented and to have the ability to evaluate program effectiveness. Districts with vision and mission statements explicitly for the dual language programs and professional development on DL practices show greater success in implementation and improved student academic proficiency.
- C. **Strong school leadership fosters program success.** School administrators should understand that their knowledge and support of the DL initiative is critical for it to be successful in their schools. Educate parents and staff regarding the specific differences these children will experience in the DL environment. Be sure to include both the positive aspects and the many challenges that will result.
- D. **Engage in ongoing professional development on DL practices, social justice, and LatCrit theory in education.** Professional development to support TWI programs should be explicitly focused on DL pedagogy and practice, and should include district-level personnel, school administrators, school support personnel, and all teachers working in the DL program. Also critical to the success of practitioners working in a diverse school is training on socially just education

pedagogy and Latino Critical conceptualization if the program is Spanish.

Awareness of these issues and the ability to develop practices which promote a socially just environment will foster the sociocultural aspects of the program. Be prepared for an amazing phenomenon with the pedagogical shift in DL education—it is clearly worth the effort, and your lives will be enriched from being a part of it!

- E. **Create collaborative teams.** This starts with district support, and if there is more than one DL school in the district, the creation of cross-school collaboration can support a teacher who may be the only one assigned to a specific grade in DL in a school. Collaboration for DL and its socially just pedagogy can be fostered across the entire school with the inclusion of traditional classroom teachers. One piece of advice - don't work in a DL school as an administrator, coach, or teacher if you aren't committed to continuous professional development, reflective practice, and strong collaboration.
- F. **Develop 'Best Practices' for Dual Language.** This study highlighted many strategies for their high potential to promote student academic success. Literacy instruction does not need to be duplicated in both languages, and the use of vocabulary development, oracy, and content-based learning with a bridging component will greatly promote programmatic success. Be reflective when evaluating the effectiveness of these practices and create teams to further develop and incorporate these practices into the curriculum. Also critical to building DL 'best practices' is the continued development of teacher instructional practice and delivery to hone their skills at teaching in a DL setting.

G. Allocate the two languages of instruction across content areas and grades.

Allocating the two languages across content areas and grades proves to eliminate gaps in content knowledge due to language of instruction. This promotes team planning efforts to create curriculum maps which support biliteracy goals and will also help to avoid gaps in student knowledge in L1 or L2 and creates alignment with teaching standards across the languages. The creation of a district-driven map which allocates which grades teach what subject was highly recommended by the most successful districts.

H. Celebrate the sociocultural benefits created by the dual language pedagogy.

Socially just practices which are sensitive to students whose primary language is not English were reported as the greatest common factor in student success. The development of both academic and life skills emerges in an environment which promotes multiculturalism and respect for differences. Also evidenced was increased involvement from the staff, students, and the entire learning community.

I. Evolve the DL environment with all stakeholders. Administrators can capitalize on building a community that supports the tenets that are inherent in dual language schools. Provide knowledge and support of student involvement, including the gains it can offer them the differences in the amount of time it will take to become proficient due to mastering two languages simultaneously. Also, be sure to identify both academic and personal stressors that students may face in the process of learning in a TWI setting. Align DL and traditional class curriculum to promote collaboration across all teachers. Invite Latino families to

celebrate their culture and language in the school and at special events, and fully embrace the multicultural environment created by the DL programs to foster buy-in from all staff, students, and community members.

Recommendations for Further Research

With enough time to explore the many questions that arose during the process of this study, a more thorough evaluation of the impact dual language instruction has upon the success of Spanish-speaking LEPs enrolled therein would have produced a more complete set of results. Based upon these findings are several recommendations for future studies:

- A. **Develop research around strategies and ‘best practices’ being used explicitly in dual language classrooms.** Focus on the successful strategies from this study and conduct research on those practices specifically. Research educational ‘best practices’ which may look different when being implemented in dual language classrooms. Strategies commonly referred to as ‘best practices’ in the educational community were being used in these schools, but how they were implemented into the TWI classrooms and if they were successful in promoting proficiency for ELLs had varying results. Several additional strategies emerged as common practices in these schools which were specific to teaching ELLs in both their primary language and the target language, which included dual literacy, oracy, bridging, and ‘The Bridge.’ An exploration of how these strategies are being developed and used in DL schools would add critical knowledge to current literature on dual language instruction.
- B. **Conduct research which controls for other variables.** There are many influences on students’ abilities to perform well on standardized tests and

controlling for the factors which may affect student scores could provide an interesting set of findings. Isolating variables based upon student subgroups such as economically disadvantaged, learning disabled, race, or students with multiple subgroup classifications may yield results that offer a different perspective on student academic success in TWI. It may also prove interesting to group all LEPs in this study or to analyze test scores of the English speakers in TWI programs. There are many potential variables to consider for further study.

- C. **Evaluate the impact of leadership on program success.** Differences in leadership style has been reported in literature and by participants in this study as a defining factor for school success. Information regarding the fidelity of the TWI programs was discussed regarding the knowledge, experience, and support of dual language practice from administration as a causal factor for its success or failure.
- D. **Examine DL students' progress through middle and high school.** According to much of the literature and feedback from interview participants, the proficiency scores of both English- and non-English-speaking students rise significantly after being in an elementary DL program. This research could include but is not limited to the following sets of data:
- a) Longitudinal studies of EOG scores for LEPs with elementary schooling in a DL program compared to their non-DL and English-speaking peers.
 - b) The percentage of DL students, both Spanish- and English-speaking, who received placement in advanced classes during their secondary education.
 - c) Comparisons between student scores in content areas on English assessment to student scores on Spanish assessments on the same content.

d) High school graduation rates of Spanish-speaking LEPs enrolled in DL programs compared to their Spanish-speaking LEP peers not enrolled in a DL program.

E. **Examine other assessment scores and performance assessments.** There is strong potential for measuring student academic success by administering and collecting sets of data on outcomes of Spanish-speaking students being measured throughout their education on summative assessments in their primary language. It would also prove interesting to uncover if any of the noted benefits beyond literacy are evident in the performance of DL students in math, science, the arts, or placement in advanced courses in middle and high school.

F. **Conduct a more in-depth analysis of student data across the state.** Time constraints and access issues prevented deeper exploration into sets of student data which could have informed this study more completely. Developing a study which includes all 95 schools identified in North Carolina currently using the TWI model of DL and collecting a consistent set of data across these districts would provide a more comprehensive analysis of the quantitative assessment data. This would also allow the researcher to evaluate the statistical significance and potentially identify a set of strategies and practices being highly used. Several datasets which would be practical in ascertaining highly significant study results may include:

a) Best practices being used, and subsequent measures of student success based upon those practices.

- b) The application of socially just pedagogy and LatCrit sensitive programs and practices.
- c) Longitudinal study of individual LEP students' EOG scores from all eight DL schools to compare TWI enrolled and traditional classroom enrolled students.
- d) Correlation analysis of how the EOG reading assessment scores of LEPs in DL relate to their math and science EOG scores.
- e) Number of years for TWI students to exit LEP status as determined by the ACCESS scores compared to non-TWI LEP students.

Summary

The academic achievement gap for English language learners (ELLs) continues to indicate that English speakers outperform ELLs on all measures of standardized testing. Decades of research have been presented as evidence which shows the need for further development of pedagogy for teaching ELL students. The high academic failure rate of the Spanish-speaking ELL population, coupled with their exponential growth in North Carolina, made it an excellent location to conduct this study of effective methods and strategies supporting a socially just and LatCrit sensitive education for Spanish-speaking students. The literature that currently exists relies heavily upon data and test scores to measure program success, yet there are few studies on how these results are achieved. Studies have resulted in proof of TWI program effectiveness, yet specific components that generate their success is lacking in the literature. This study was focused on specific instructional strategies being used across the state in TWI dual language programs to teach literacy with consistent success. Eleven schools in North Carolina were invited to participate based upon filtering criteria which included the use of the two-way immersion (TWI) model of dual language

with ELLs who were Spanish-speaking and prior evidence of programmatic success in promoting literacy proficiency in their limited-English proficient (LEP) student cohorts. Eight schools across three districts agreed to be a part of the study.

Through research focusing on the strategies used most successfully to promote proficiency for Spanish-speaking ELLs in TWI programs, this study uncovered specific strategies that could be used to more effectively teach ELLs in our public schools. The primary research question guiding this study was, “How do the established TWI programs currently employed in NC promote the literacy proficiency of Spanish-speaking LEPs?” Secondary questions included “How do TWI classroom teachers describe the most successful strategies promoting student proficiency in literacy in their classrooms?”; “What specific strategies being employed are associated with the greatest success within the TWI programs?”; “Is there consistency in structure and application across different programs to validate these findings?”; and “Do the quantitative data support the qualitative findings from the interview and questionnaire data?”

The use of a mixed methods approach was used sequentially, beginning with a collection of qualitative data from interviews of district-level program coordinators, and then subsequent interviews of school-based principals, assistant principals, and literacy and curriculum coaches. The final data collection in this phase was done using a teacher questionnaire which invited the participation of all certified teachers working in the dual language classrooms within the participating schools. The data collected during the qualitative phase focused on participant reports regarding the measures of success they were having with specific strategies and practices that they used to determine the effectiveness of the TWI program in their schools. Both qualitative and quantifiable results were drawn from

this phase of the study regarding program success based upon the perceptions of practitioners in the districts and schools. In analysis of the data, a conceptual lens was applied regarding the potential for the practices being used to be categorized as equitable through use of LatCrit and social justice theories. During the second phase of the study, quantitative data were collected from districts including reading End-of-Grade scores and ACCESS English proficiency scores. It is important to note that both of these state tests, which were the only common assessments given across the participating schools, were conducted in English and measured only student proficiency skills in the dominant language. The results of these tests were sorted into two groups of Spanish-speaking LEP students: those enrolled in TWI classrooms and those enrolled in traditional classrooms. The results of these analyses included TWI students who had spent at least 3 years in the TWI programs, and comparisons were made within individual schools to determine student academic success in literacy proficiency. District data were then compiled in a cross-case analysis of the participating districts. The results of the data collected during the two phases of the study were reported separately, and then combined for possible comparison or integration of the findings.

The results of the research included 12 relevant findings (see Table 4.2) and three additional notable findings. From these findings, and with inclusion of knowledge gained during the process of the entire study, conclusions were drawn. The most relevant conclusions highlight TWI program success for improving literacy proficiency for Spanish-speaking LEPs enrolled in TWI classrooms and providing a socially just Latino critical theory pedagogy which resulted in them outperforming their peers in traditional classrooms. Specific strategies were identified as ‘best practices’ for TWI classroom instruction with vocabulary development, content-based learning, and small group literacy being the most

effective. Several new strategies to teach ELLs in a dual language setting emerged. These included ‘oracy,’ ‘bridging,’ and curriculum mapping with language allocation. Significant differences in the ways in which the TWI programs were being conducted existed across all three districts, causing the results to vary by school and district. This illuminated the validity of these practices by showing that the two districts embracing the strategies showed much higher overall performance for Spanish-speaking LEPs in TWI classrooms than their peers enrolled in traditional classrooms, while the district which did not employ these same strategies fared far worse. Noted as important considerations for practitioners were careful planning and program selection, commitment to professional development and resources needed for program implementation, and the influence that leadership has upon the effectiveness of the implementation of a TWI dual language program in their schools. Several further studies were suggested as beneficial follow-up to support this research.

APPENDIX A: INTERVIEW PROTOCOL

INTERVIEW PROTOCOL - for district TWI program coordinators (use strategy chart)

Briefing

- Thank them for their participation, and provide information regarding confidentiality
- Overview the study, use of collected information and ask if they have any questions
- “Do you mind if I record our interview so that I may later transcribe your responses?”

<i>QUESTIONS</i>	<i>Participant Affect</i>
<hr/>	
1. How long have you been in your current position as _____?	
2. What TWI model is your district currently using at the selected sites?	
3. Do you have a vision and mission for your TWI program? If so, what is it?	
3. Is the model consistent across all schools and grades being served?	
4. What measures of the success of the program inform you as a district to continue &/or modify its use in your schools?	
5. What instructional strategies are being used that you believe are the most successful at improving Spanish-speaking academic proficiency in reading?	
6. According to my research, the following 5 strategies are most frequently being used in TWI classrooms across the country. Which, if any, would you rate as highly successful by the standards you mentioned:	
- small group literacy instruction (How is it structured?)	
- dual literacy	
- content-based instruction	
- vocabulary development (Who is responsible for vocabulary?)	
- heterogeneous collaboration (How is it structured? Percentage of time?)	
- other? _____	
7. Is there district-wide training for staff on developing these strategies? If so, what is the training?	
8. Is professional development for TWI staff conducted to ensure consistency in program instructional delivery? Who leads these PD sessions?	
9. How does the staff respond to the professional development offered?	

QUESTIONS

*Participant
Affect*

10. What measures are used to evaluate the delivery of PD taught instructional strategies of your teachers? Are they coached before, during, after?
 11. To what degree are there inconsistencies in TWI instructional delivery?
 12. How often do you meet with your TWI site administrators regarding student performance? Is there data presented at the meetings for analysis?
 13. How would you summarize what the data is telling you about your program's ability to successfully teach literacy to Spanish-speaking ELLs?
-

Debriefing

- Is there anything else you can think of that we didn't cover that you would like to add?
- (Turn off recorder) thank you, i enjoyed hearing your perspective about _____.
- The information you shared will be used to analyze site-based opinions about TWI programs and may help to develop a "gold standard" for DL programs.
- Any identifying information about an individual/organization participating in this study will remain confidential.
- A copy of the full report upon its completion will be made available to you.

INTERVIEW PROTOCOL - for district TWI program coordinators (use strategy chart)

Briefing

- Thank them for their participation, and provide information regarding confidentiality
- Overview the study, use of collected information and ask if they have any questions
- “Do you mind if I record our interview so that I may later transcribe your responses?”

<i>QUESTIONS</i>	<i>Participant Affect</i>
1. How long have you been in your current position as_____?	
2. What TWI model is your program currently using in the classrooms?	
3. Is the model consistent across all grades being served?	
4. How do you determine student success in the program?	
5. What instructional strategies are you using that you believe are the most successful at improving Spanish ELLs’ academic proficiency in reading?	
6. According to my research, the following 5 strategies are most frequently being used in TWI classrooms across the country. Which, if any, would you rate as highly successful by the standards you mentioned: - small group literacy instruction (How is it structured?) - dual literacy - content-based instruction - vocabulary development - oracy - bridging/The Bridge - heterogeneous collaboration (How is it structured? Percentage of time?) - other? _____	
7. Is district-wide training available for staff on developing these strategies? If so, what is the training?	
8. Do you conduct school-based professional development? If so, on what?	
9. Is there training for instructional assistants for TWI instruction?	
10. How does the staff respond to the professional development offered?	

<i>QUESTIONS</i>	<i>Participant Affect</i>
11. What do your classroom observations tell you about the overall effectiveness of the PD and instructional strategies being used by teachers? 12. To what degree are there inconsistencies in TWI instructional delivery? 13. How often do you meet with your TWI teachers regarding student performance? Is there data presented at the meetings for analysis? 14. How would you summarize what the data is telling you about your program’s ability to successfully teach literacy to Spanish-speaking ELLs?	

Debriefing

- Is there anything else you can think of that we didn’t cover that you would like to add?
- (Turn off recorder) thank you, I enjoyed hearing your perspective about _____.
- The information you shared will be used to analyze site-based opinions about TWI programs and may help to develop a “gold standard” for DL programs.
- Any identifying information about an individual/organization participating in this study will remain confidential.
- A copy of the full report upon its completion will be made available to you.

APPENDIX B: TWI SCHOOLS IN NC SITE SELECTION FOR RESEARCH

District	School Name	Principal Codes	Program Director	2016-17 Prog. Yr.	Grade	Chosen site
A	100	101	102: Title 1 Lead	3	K-2	
	200	201	202	3	K-2	
	300	301		3	K-2	
B	100	101	102	12	K-5	X
	200	201	202	9	K-5	X
C	100	101	102: DL Coordinator	18	K-8	X
	200	201	202: Magnet Lead	14	K-8	X
D	100	101		5	6-8	X
	200	201	202	5	K-3	X
	300	301	302: Curriculum Coach	11	K-5	X
E	100	101		9	4-5	X
	200	201	202: District Coordinator	13	K-1	X
	300	301	302	11	2-3	X
F	100	101	102: DL Coach	16	K-5	X
	200	201		4	K-3	
	300	301		4	K-3	

Contact person confirming program information

Elimination Criteria

X = selected sites for this study

APPENDIX C: STUDY SITES LEP READING PROFICIENCY 2015-2017

LEP Reading EOG Proficiency for Study Sites vs. NC Averages				
	<i>School</i>	2015 <u>All LEP</u>	2016 <u>All LEP</u>	2017 <u>All LEP</u>
District A	* 100	16.2%	* 18.2%	* 25.0%
	* 200	6.4%	10.8%	* 25.0%
District B	* 100	* 35.7%	* 35.9%	* 31.0%
	* 200	* 20.0%	15.4%	* 25.0%
District C	* 100	.	8.2%	* 17.0%
	* 200	* 28.3%	* 18.6%	* 19.2%
	300	9.9%	5.7%	7.8%
District D	* 200	* 25.0%	* 29.0%	10.7%
	* 300	10.0%	* 24.0%	* 16.7%
District E	100	.	5.4%	9.1%
	* 200	* 21.9%	* 32.9%	* 28.6%
State LEP Proficiency		18.0%	17.8%	16.3%
* denotes above state average proficiency for LEPs				

APPENDIX D: LETTER OF REQUEST FOR PARTICIPATION IN STUDY

Letter of Request for Participation in Study

April 17, 2017

Sharon R. Goldman, Ed. S.

University of North Carolina at Chapel Hill

Re: IRB Study #17-0853

District Name

District Liaison for Research Initiatives

District Address

Dear Fellow Educators in North Carolina;

I am excited to introduce you to an important research study regarding the teaching of Spanish-speaking ELLs in two-way immersion (TWI) programs across the state. You have been selected from a large number of schools as one of the eleven sites for inclusion in this study. Ground-breaking strides are being made in your schools to provide your students with the greatest possible education, and this study aims to uncover those practices which you have developed which allow you to have the greatest success. Imagine becoming part of a small group of schools noted in our state for closing the achievement gap between ELLs and English-speaking students! This research will be conducted primarily by the principal investigator with a minimal amount of time being spent with personnel. The results of this research will provide an overview of how well dual language TWI programs are working to

promote literacy proficiency for Spanish-speaking students and will inform the development of future evaluation processes. The benefits for your district are many, including access to free data analyses conducted on your programs, comparative analyses being done across the district and state, as well as the opportunity to participate in a study which could change the way ELLs are taught. It may also help to identify a “gold standard” for ELL instructional strategies and support the program initiatives you have established in your district.

I sincerely hope you will strongly consider being a part of this important study which hopes to learn from what you are doing in your schools to improve education for the Spanish-speaking ELL students in our schools. Attached you will find a detailed description of the process which will be used in this study. Please contact me, the principal investigator for this study, with any questions or concerns that you may have. I will send a follow-up email including the same information, and I hope to hear from you soon.

Yours sincerely,

Sharon R. Goldman

(919) 619-0929

sgoldman@email.unc.edu

srgoldman2@gmail.com

North Carolina Dual Language Two-Way Immersion Programs: Exploring Instructional Practices for Spanish-speaking ELLs

IRB Study #17-0853

Dear Potential Study Site Participants;

As we know, Limited-English Proficient (LEP) students historically do not perform well in K-12 schooling in the US, and the exponential growth of the Spanish-speaking population across our state makes it an ideal setting in which to conduct this study. The goal is to increase the body of knowledge for the educational community regarding the success of current two-way immersion (TWI) programs and the instructional strategies that are identified as most successful in providing academic support and promoting success for Spanish-speaking LEPs. The following information will outline the procedures which will be used in this study to research strategies that are working in your schools to promote reading proficiency for the Spanish-speaking ELLs.

The intention is to inform you about the study and recruit your support for and participation in this research study on dual language two-way immersion programs being used in North Carolina. The results of this research will provide an overview of how well dual language programs are working to promote literacy proficiency for Spanish-speaking students and will inform the development of future evaluation processes. The research goals are to begin Phase 1 of this study during the Fall of 2017 and subsequently collect Phase 2 data to finish up final data collection needs by December of 2017. As a former school administrator and teacher, I am well aware of the high demands placed upon your districts and schools, so I plan to work with participants in a manner which is least intrusive on their

schedules. The amount of time needed to complete the interviews is estimated at one hour per interview, so a total of 1-2 hours will be required per school for this phase of the study. The teacher questionnaire will be submitted electronically, can be done at any time during Phase 1 of the study, and will likely be completed in 30-45 minutes. Quantitative data collection will be completed primarily by the principal investigator and will require minimal assistance from data management personnel. Due to the research methodology being used, the total time required for participation in this study is just a few hours per school. This research study intends to identify:

- The instructional strategies being used in two-way immersion dual language classrooms;
- Administrative and program director opinions regarding the success of the identified strategies;
- The means by which “success” of these strategies is being measured;
- Opinions of educators working directly with the TWI dual language populations regarding the success of identified strategies; and
- Assessment data to evaluate the success of your LEPs on annual standardized tests of cohorts enrolled in TWI programs in North Carolina (ACCESS and Reading EOGs)

Site selection utilized the NC Dual Language/Immersion Team matrix, which identified 27 districts currently employing dual language immersion programs in the state. The 95 schools identified with operational TWI programs were narrowed using the following exclusion criteria:

NC Schools with Dual Language Two-Way Immersion Programs

Schools
Remaining
95

<u>Exclusion Criteria</u>	<u>Number</u>	
Full-immersion programs primarily targeting native English speakers	45	50
Partial-immersion programs primarily targeting English speakers	17	33
Independent, charter, and private schools	5	28
Two-way immersion programs not targeting Spanish speakers	1	27
Developmental bilingual, designed to maintain heritage language	1	26
Schools in districts with less than 2 schools using TWI programs	10	16

These filters were applied in order to obtain comparable case study samples which shared common attributes of two-way immersion programs and student populations in the state. Upon completion of the filtering process, six districts housing 16 schools with dual language two-way immersion models being implemented in grade levels ranging from kindergarten through eighth grade settings met the inclusion criteria. The further exclusion of sites in operation for less than five years was done to for two reasons: 1) to eliminate program bias based on the “exploratory” nature experienced in the first years of a new program; and 2) to have End-of-Grade cohort data at all schools for third through eighth grade students participating in two-way immersion. The result was five districts housing ten sites to be included in the study.

The current study will include four steps of data collection: the interviews of one program coordinator per district (5); site-based program administrators from each school (10-30); a follow-up teacher questionnaire for certified teachers working directly in the TWI classrooms (TWI teachers); and, a review of assessment data from school years 2013-2014 through 2016-2017. The qualitative data collected will be completed prior to filtering assessment data in order to eliminate researcher and informant bias in regard to proficiency

scores but will allow the study to establish the levels of success achieved by each of the participating sites to support strategies identified as “successful.” The researcher will carry out an in-depth analysis of the data provided by constructing a matrix of identified instructional strategies, using the same questions for both interviews and the follow-up questionnaire to allow for extrapolation and interpretation of common strategies and their effect sizes. The patterns emerging from the study may help to identify “how” and “why” the program is working to improve literacy for Spanish speaking students. Ultimately, the data collected in this study, which will be made available to all participants, may assist the districts and schools in programmatic decision-making, support further studies in the field, and may help to develop an argument for large-scale models to be developed for serving all Spanish-speaking ELLs enrolled in schools across North Carolina.

The study design includes two sequential phases:

1. Phase 1 – Qualitative data collection:

- a) Interview protocol for district-level dual language program directors requesting information about literacy instructional practices in their TWI schools (approx. 50 minutes);
- b) Interview protocol for site-based TWI program administrators requesting information about literacy instructional practices in their TWI classrooms (approx. 50 minutes);
- c) Follow-up questionnaire for all teachers working in TWI classrooms requesting information about literacy instructional practices in their individual classrooms (20-30 minutes);

2. Phase 2 - Quantitative data collection:

- a) annual End-of-Grade Reading assessments and ACCESS tests for all LEP students participating in the TWI program from school years 2011-2016, as well as for LEP students who are not enrolled in TWI classrooms in the schools;
- b) Exit status of LEPs in TWI programs for at least five years (completed by the researcher in cooperation with school data managers during the final phase of the study), and,
- c) any district or school assessments that are given to LEP students enrolled in the TWI classrooms other than Reading EOGs that may inform student academic proficiency in reading (i.e. reading, writing, listening, or speaking assessments given in Spanish)

Identifying information about any individual/organization participating in this study will remain confidential. I sincerely hope you will agree to participate in the Study of North Carolina's TWI programs and encourage your colleagues or members to also participate by doing the following:

- District Program Coordinators:
 - Agree to participate in a semi-structured interview to discuss your two-way immersion program and the key elements of its success (approx. 50 minutes)
 - Promote this study to the selected sites and encourage their participation
- Site-based Program Administrators:
 - Agree to participate in a semi-structured interview to discuss your two-way immersion program and the key elements of its success (approx. 50 minutes)
 - Promote this study to your TWI teachers and encourage their participation

- Provide access to ACCESS and EOG Reading assessment data for all students participating in the TWI program from years 2008-2014
- Two-way Immersion Teachers:
 - Complete the on-line questionnaire on your own time (approx. 20 minutes) or seek permission to complete it from the appropriate person in your place of work
 - Provide feedback regarding your practice and rate the success of instructional strategies

The interviews will be conducted during Phase I of this study, which will commence during the Spring semester of 2016-2017 school year. Participants in the interviews only will be asked to sign a consent form, which identifies that the study will be conducted according to IRB guidelines and will remain anonymous. Teacher questionnaires will be anonymous and will be sent via email to all TWI practitioners after the completion of all district and site-based interviews. Phase II of this study will commence after collection of all qualitative data is complete, and data collected will be compiled by the researcher. All data collected during this phase will be collected by groups of students, and no personal student information will be collected or used in this research. For further questions regarding this study, you may contact the principal investigator, Sharon Goldman, her supervising professor, Dr. Kathleen Brown at brownk@email.unc.edu or at the School of Education at UNC-CH (919)966-1354. You may also contact the UNC-CH Institutional Review Board (IRB) regarding this study at (919)966-3113 or go online to learn more about participation by using the link <http://www.hhs.gov/about-research-participation>.

The information gained during the study will be used to highlight individual program dynamics and comparative data across TWI programs currently in operation targeting Spanish-speaking ELLs. This research will provide an overview of TWI practices in North Carolina to measure the impact of specific instructional strategies being implemented. It may also offer insight into the development of a “gold standard” for Dual Language programs. Participants will receive the research report and may be invited to participate in subsequent studies to further develop its findings. Your cooperation in helping to complete this study will be greatly appreciated and will contribute to establishing a base of empirical evidence to promote educational equity for all students who are English language learners in our public schools.

Yours sincerely,

Sharon R. Goldman, Ed. S

(919) 619-0929

srgoldman2@gmail.com

APPENDIX E: EMAIL TO DISTRICT LIAISONS

Dear Potential Study Site Participants;

It is with great enthusiasm that I request your support as a participant of this research study on teaching ELLs in North Carolina public schools. As we know, Limited-English Proficient (LEP) students historically do not perform well in K-12 schooling in the US, and the exponential growth of the Spanish-speaking population across our state makes it an ideal setting in which to conduct this study. The goal is to increase the body of knowledge for the educational community regarding the success of current two-way immersion (TWI) programs and the instructional strategies that are identified as most successful in providing academic support and promoting success for Spanish-speaking LEPs. The following information will outline the procedures which will be used in this study to research strategies that are working in your schools to promote reading proficiency for the Spanish-speaking ELLs.

This mixed methods study will use three data measures to establish the success of TWI programs in North Carolina: Interviews of district and school-based program administrators; a teacher questionnaire; and comparative analyses of reading EOGs and ACCESS test scores. The timeline goals are to begin Phase 1 of this study during the Spring of 2017, collect Phase 2 data in the summer of 2017, and finish up final data collection in the Fall of 2017. As a former school administrator and teacher, I am aware of the high demands placed upon your districts and schools, so I plan to work with participants in a manner which is least intrusive on their schedules. Little time is needed to complete the interviews, and teacher questionnaires can be submitted electronically at any time during the study. Quantitative data collection will require minimal assistance from data management

personnel, as most of the data will be compiled by the researcher. Due to the methodology being used, only a few hours of time are required for participation in this study.

This research study intends to identify:

- Instructional strategies being used in two-way immersion dual language classrooms;
- Administrative opinions regarding the success of the identified strategies;
- The means by which “success” of these strategies is being measured;
- Feedback from educators working directly with the TWI dual language populations; and
- Assessment data on exit rates of your LEPs and annual standardized tests of cohorts enrolled in TWI programs in North Carolina (ACCESS and Reading EOGs)

The information gained during the study will be used to highlight program dynamics, specific instructional strategies, and state-wide data targeting Spanish-speaking ELLs in North Carolina. It may offer insight into the development of a “gold standard” for Dual Language programs. Participants will have full access to the data collection and research report and may be invited to participate in subsequent studies to further develop its findings. Your support in the completion of this study is greatly appreciated and will contribute to establishing a much-needed base of empirical evidence promoting educational excellence for all ELLs in our public schools. Please contact me if you have any questions or concerns regarding your participation in this study.

Yours sincerely,

Sharon R. Goldman, Ed. S.

(919)619-0929

srgoldman2@gmail.com

APPENDIX F: LETTER TO INFORM PARTICIPANTS OF THE STUDY

Letter to inform Participants of the Study

UNC-CH Doctoral Research Study - IRB Study #17-0853

North Carolina Dual Language Two-Way Immersion Programs: Exploring Instructional Practices for Spanish-speaking ELLs

Dear Study Site Participants;

It is with great pleasure that I welcome you as participants of this research study on teaching ELLs in North Carolina public schools. As we know, Limited-English Proficient (LEP) students historically do not perform well in K-12 schooling in the US, and the exponential growth of the Spanish-speaking population across our state makes it an ideal setting in which to conduct this study. The goal is to increase the body of knowledge for the educational community regarding the success of current two-way immersion (TWI) programs and the instructional strategies that are identified as most successful in providing academic support and promoting success for Spanish-speaking LEPs. The following information will outline the procedures which will be used in this study to research strategies that are working in your schools to promote literacy proficiency for the Spanish-speaking ELLs.

This mixed-method study will use three data measures to establish the success of TWI programs in North Carolina: Interviews of district and school-based program administrators; a teacher questionnaire; and comparative analyses of reading EOGs and ACCESS test scores. The timeline goals are to begin Phase 1 of this study during the Spring

of 2017, collect Phase 2 data in the summer of 2017, and finish up final data collection in the Fall of 2017. As a former school administrator and teacher, I am aware of the high demands placed upon your districts and schools, so I plan to work with participants in a manner which is least intrusive on their schedules. Little time is needed to complete the interviews, and teacher questionnaires can be submitted electronically at any time during the study.

Quantitative data collection will require minimal assistance from data management personnel, as most of the data will be compiled by the researcher. Due to the methodology being used, only a few hours of time is required for participation in this study.

This research study intends to identify:

- Instructional strategies being used in two-way immersion dual language classrooms;
- Administrative opinions regarding the success of the identified strategies;
- The means by which “success” of these strategies is being measured;
- Feedback from educators working directly with the TWI dual language populations;
- and
- Assessment data on exit rates of your LEPs and annual standardized tests of cohorts enrolled in TWI programs in North Carolina (ACCESS and Reading EOGs)

The information gained during the study will be used to highlight program dynamics, specific instructional strategies, and state-wide data targeting Spanish-speaking ELLs in North Carolina. It may offer insight into the development of a “gold standard” for Dual Language programs. Participants will have full access to the data collection and research report and may be invited to participate in subsequent studies to further develop its findings.

Your support in the completion of this study is greatly appreciated and will contribute to

establishing a much-needed base of empirical evidence promoting educational excellence for all ELLs in our public schools.

Yours sincerely,

Sharon R. Goldman, Ed. S.

(919)619-0929

srgoldman2@gmail.com

APPENDIX G: INTERVIEW PARTICIPATION CONSENT FORM

Interview Participation Consent Form

University of North Carolina at Chapel Hill

Consent to Participate in a Research Study

**Adult Participants: School district program coordinators and site-based administrators
for dual language two-way immersion programs in North Carolina**

Consent Form Version Date: 5/3/2017

IRB Study # 17-0853

Title of Study: North Carolina Dual Language Two-Way Immersion Programs: Exploring
Instructional Practices for Spanish-speaking English-Language Learners

Principal Investigator: Sharon Goldman

Principal Investigator Department: School of Education Deans Office

Principal Investigator Phone number: (919) 619-0929

Principal Investigator Email Address: sgoldman@email.unc.edu

Faculty Advisor: Kathleen Brown

Faculty Advisor Contact Information: (919) 966-1354

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary.

You may choose not to participate, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form by the Principal Investigator listed above to sign before you participate. You should ask them, their university advisor, or the UNC institutional review board (IRB) any questions you have about this study at any time.

What is the purpose of this study?

This research study is focused on strategies that are being used with success for Spanish-speaking ELLs in North Carolina public school Two-way Immersion programs. Please read this form carefully and ask any questions you may have before agreeing to take part in the study. The purpose of this study is to explore strategies being used in your schools to teach reading through use of TWI instructional programs.

The target population of this study is Spanish-speaking ELLs participating in TWI programs.

You are being asked to be in the study because your district and school has been identified through a process of exclusion to have a successful TWI program.

Are there any reasons you should not be in this study?

You should not participate in this study if information regarding your TWI practices is not

something that you would like to have included in an evaluation of best practices for Spanish-speaking ELLs.

How many people will take part in this study?

There will be approximately 190 people in this research study.

How long will your part in this study last?

Your part in this study should last approximately 100 minutes, including contact with the principal investigator through phone calls for questions and concerns, setting up an interview time, the actual interview (approximately 60 minutes), and a possible follow-up for questions not covered in the initial interview or for clarity of something that was said during the interview.

What will happen if you take part in the study?

This study will collect both qualitative and quantitative data in a specific sequential pattern to maximize the potential outcome. The patterns emerging from the study may assist participating sites in programmatic decision-making, supporting further studies in the field, and may help to develop an argument for large-scale models to be created to serve all Spanish-speaking ELLs enrolled in schools across North Carolina. The study design includes:

1. Interview protocol for district-level dual language program directors (approx. 60 minutes);

2. Interview protocol for site-based TWI program administrators (approx. 60 minutes);
3. Follow-up questionnaire for all teacher working in TWI classrooms (approx. 20 minutes);
4. Quantitative data collection: a) disaggregation of EOG reading tests for all LEP students in TWI; b) annual ACCESS tests for all students participating in the TWI program from school years 2011-2016, as well as for LEP students who are not enrolled in TWI classrooms in the schools; and, c) Exit status of LEPs in TWI programs for at least five years (completed by the researcher in cooperation with school data managers during the final phase of the study).

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. The benefits for you may include access to collected data, information regarding other TWI practices being used across the state, and a cross-case analysis of the all data included within the state-wide study. There is potential to learn more about methods that are promoting academic proficiency in reading for Spanish-speaking ELLs across North Carolina.

What are the possible risks or discomforts involved from being in this study?

There are no known risks anticipated from your participation in this study. There may be uncommon or previously unknown risks. You should report any problems to the researcher.

What if we learn about new findings or information during the study?

You will be given any new information gained during the course of the study that might affect your willingness to continue your participation.

How will information about you be protected?

Your answers will be confidential. The records of this study will be kept on a secured server at UNC. In any sort of report made public, no information that will make it possible to identify you will be included. Research records will be kept in a locked file; only the principal researcher will have access to the records. Tape-recorded interviews will be destroyed after they have been transcribed, which is anticipated will be within one year of its taping.

Your privacy and confidentiality will be protected. The key procedures for protecting the privacy and confidentiality of the individual's data include:

- Alpha-numeric codes will be used for all participants
- Records will be secured on a UNC server with access only to the principal investigator and her UNC faculty advisor, Dr. Kathleen Brown.
- The principal investigator will be the only one with access to any identifiable documents, including your contact information, your consent form, and the audio recordings of your interview.
- A linkage file containing identifiers for alpha-numeric coding schemes will be maintained by the principal investigator and stored on the UNC server. This file will be destroyed at the conclusion of this study, no later than May 2021.

Participants will not be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable

by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

- Audio tapes will be destroyed at the conclusion of this study, no later than May 2019.
- Storage of audio tapes will be done in AtlasTi software on the UNC server for transcription. Once all follow-up questions have been addressed, transcribed, and coded by the principal investigator, and the initial submission of study results has been submitted, audio tapes will be permanently erased.
- Audio recordings may be requested to be turned off by participant. Principal investigator will need additional time to complete the interview in order to hand-record responses.

Check the line that best matches your choice:

_____ OK to record me during the study

_____ Not OK to record me during the study

Participants must agree not to reveal anything they learn from interviews, group discussions or other activities.

What if you want to stop before your part in the study is complete?

You can withdraw from this study at any time, without penalty. The principal investigator also has the right to stop your participation at any time. This could be because you have had

an unexpected reaction, have failed to follow instructions, or because the entire study has been stopped. As soon as it is requested, your participation will be immediately terminated. All information collected prior to your request to end participation will be retained by the principal investigator.

Will you receive anything for being in this study?

You will not receive anything for taking part in this study.

Will it cost you anything to be in this study?

It will not cost you anything to be in this study.

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions about the study (including payments), complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form. **If you have questions**, the researcher conducting this study is Sharon Goldman. Please ask any questions you have now. If you have questions later, you may contact Sharon Goldman at srgoldman2@gmail.com or sgoldman@email.unc.edu and at 919-619-0929. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the supervising advisor, Dr. Kathleen Brown in the School of Education at (919)966-1354 or brownk@email.unc.edu. You may also contact the UNC Institutional Review Board (IRB) at 919-966-3113 or access their website at <http://www.irb.unc.edu>.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

Signature of Research Participant	Date
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Printed Name of Research Participant

Signature of Principal Investigator Obtaining Consent	Date
---	------

Printed Name of Principal Investigator Obtaining Consent

APPENDIX H: TWI TEACHER QUESTIONNAIRE

TWI Teacher Questionnaire (to be delivered electronically via Qualtrics, and responses collected anonymously with no site-based designation)

IRB Study # 17-0853

Title of Study: North Carolina Dual Language Two-Way Immersion Programs: Exploring Instructional Practices for Spanish-speaking English-Language Learners

Principal Investigator: Sharon Goldman

Consent Form Version Date: 5/17/2017

Expected duration of subject participation in the teacher questionnaire: 20-30 minutes

UNC-CH IRB contact information: All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Subject participation: TWI teacher participation in this questionnaire is voluntary. Subjects may choose to answer all or only some of the questions and may withdraw at any time without penalty.

Thank you for choosing to participate in this teacher questionnaire! This study is focused on identifying the most effective reading instructional strategies being used to teach Spanish-

speaking ELLs in North Carolina. Your responses will greatly help to guide this research in the development of a gold standard for teaching English learners to be bilingual and will help to promote the development of teaching strategies for educators across the state to increase ELL academic proficiency. After all, you are the ones actually making it happen for your students! You may choose to answer some or all of the questions included in this questionnaire. If you have any questions or concerns regarding this study or the anonymity of your responses and protection of your identity, contact Sharon Goldman at sgoldman@email.unc.edu or (919)619-0929 or Dr. Kathleen Brown at brownk@email.unc.edu or (919)966-1354. Please click the appropriate boxes below to begin your questionnaire.

☐ I certify that I am a licensed NC teacher working in a TWI classroom in one of the ten schools participating in the study conducted by Sharon Goldman entitled “North Carolina Dual Language Two-Way Immersion Programs: Exploring Instructional Practices for Spanish-speaking ELLs.

☐ By completing the questionnaire below and submitting it electronically, I am consenting to allow this information to be included in the research study named above.

<i>QUESTIONS</i>	<i>RESPONSES</i>
1. How long have you been a TWI teacher?	
2. What grade level(s) do you teach?	
3. What program model is currently being used in your school?	90/10 gradual immersion 50/50 constant immersion
4. What percentage of the instructional day & subjects are taught in Spanish? In English?	Spanish %= 10 20 30 40 50 60 70 80 90 English %= 10 20 30 40 50 60 70 80 90
5. What content areas are being taught in English (E)? In Spanish (S)?	Reading- E / S Math- E / S Science- E / S Social Studies- E / S Other_____ E / S
6. How do you determine the “success” of your students in mastering literacy?	

QUESTIONS		RESPONSES			
7.	What instructional strategies do you use that are the most successful for improving academic proficiency in reading?				
8.	Rate these strategies according to their level of success in your classroom (circle one):				
	small group guided reading	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	dual literacy	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	content-based instruction	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	vocabulary development	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	oracy	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	bridging/The Bridge	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	heterogeneous collaboration	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	other_____	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
	other_____	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
9.	Is there district-wide training for TWI staff on developing these strategies?				
10.	Is there professional development for TWI staff on consistency in program instructional delivery? Is this PD valuable to you?				
11.	What measures are used to evaluate your delivery of instructional strategies?				
12.	Are you coached before, during, or after observations? By whom?				
13.	How would you rate the overall effectiveness for teaching reading in your TWI program?	<i>Highest</i>	<i>Very Good</i>	<i>Moderate</i>	<i>Low</i>
14.	What is the most difficult part about maintaining the TWI program in your classroom?				
If there are any other pieces of information that you believe would be of value to this study, please include them in the area provided.					

APPENDIX I: STUDY SITES AND GRADE LEVEL CLASSROOMS SERVED BY SPANISH TWI

Spreadsheet of TWI Schools in North Carolina for Site Selections for Research - April 2017

District	School Name	2015-16 Prog. Yr.	Grades Levels	Chosen site	Grade Levels Served (number of TWI classes per grade)									# TWI Classes	✓
					K	1	2	3	4	5	6	7	8		
B	100	12	K-5	X	X (2)	X (2)	X (3)	X (2)	X (3)	X (2)				14	✓
	200	6	K-5	X	X (5)	X (5)	X (5)	X (4)	X (4)	X (4)				27 ✓	✓
C	100	18	K-8	X	X (3)	X (3)	X (4)	X (4)	X (4)	X (4)	X (3)	X (3)	X (3)	31	✓
	200	14	K-8	X	X (4)	X (4)	X (4)	X (4)	X (4)	X (4)	X (3)	X (3)	X (3)	33	✓
F	100	5	6-8	X							X (2)	X (2)	X (2)	6	✓
	200	5	K-5	X	X (2)	X (2)	X (2)	X (2)	X (1)					9	✓
	300	11	K-5	X	X (4)	X (6)	X (4)	X (4)	X (3)	X (3)				24	✓
G	100	9	4-5	X					X (2)	X (2)				4	✓
	200	13	K-1	X	X (2)	X (2)								4	✓
	300	11	2-3	X			X (2)	X (2)						4	✓
H	100	16	K-5	X	X (2)	X (2)	X (1)	X (1)	X (1)	X (1)				8	✓
		2013 (K)	K-2												
		2015 (K)	K												
Total # TWI Schools Sites Per Grade					7	7	7	7	7	7	3	3	3	51	
TOTAL # TWI Classrooms in Study					22	24	23	21	21	20	8	8	8	155	
*number of potential teacher															

APPENDIX J: INSTRUCTIONAL STRATEGIES EFFECTIVENESS RATING CROSS-STUDY MATRIX

SUCCESS RATINGS OF TWI STRATEGIES (5=Highest; 3=Moderate; 1=Low or N/A)											
<u>ADMIN. INTERVIEWS</u>	RATING	Small group Guided reading	Dual Literacy	Content- based Instruction	Vocabulary Development	Heterogenous Collaboration	Staff PD on DLI practices	Bridging/ The Bridge	Total Physical Response	Classroom Visual Aids	Oracy
District A	3	3.5	6.5	3.5	4.5	2.5	5.5	5.5	2	2	2
	2	4.5	3.5	5.5	3.5	4.5	4.5	6	0	3	0
	1	0	1	1	2	1	0	2.5	0	0	0
District B	3	1	3	4	4	1	3	2	2	1	3
	2	3	2	0	0	1	2	1	0	0	0
	1	0	0	0	0	2	0	1	0	0	0
District C	3	4	4	2	1.5	2	5	1	3	1	1
	2	2	1	3	3.5	1	1	1	0	0	1
	1	0	1	1	1	3	0	4	0	0	0
TEACHER QUESTIONNAIRES											
ALL DISTRICTS	3	38	25	38	41	18	27	16	6	10	35
	2	14	21	18	15	27	28	29	3	5	17
	1	1	5	1	1	2	2	8	2	2	4
Total Number of Participants Ratings for Each Strategy											
Highest		46.5	38.5	47.5	51	23.5	40.5	24.5	13	14	41
Moderate		23.5	27.5	26.5	22	33.5	35.5	37	3	8	18
Lowest		1	7	3	4	8	2	15.5	2	2	4
VALUE OF RATINGS FOR EACH TWI STRATEGY											
Highest		139.5	115.5	142.5	153	70.5	121.5	73.5	39	42	123
Moderate		47	55	53	44	67	71	74	6	16	36
Lowest		1	7	3	4	8	2	15.5	2	2	4
SUCCESS RATINGS OF TWI STRATEGIES											
		Total physical response	Vocabular y	Small group guided	Oracy	Content-based instruction	Classroom visual aids	Dual literacy	Staff PD on DL practices	Heterogen ous	Bridging/T he Bridge
High		13	51	46.5	41	47.5	14	38.5	40.5	23.5	24.5
Moderate		3	22	23.5	18	26.5	8	27.5	35.5	33.5	37
Low		2	4	1	4	3	2	7	2	8	15.5
VALUE RATINGS OF TWI STRATEGIES											
		Vocabulary development	Content- based	Small group guided	Oracy	Staff PD on DL practices	Dual literacy	Bridging/The Bridge	Heterogenous collaboration	Classroom visual aids	Total physical
Highest (3 points)		153	142.5	139.5	123	121.5	115.5	73.5	70.5	42	39
Moderate (2 points)		44	53	47	36	71	55	74	67	16	6
Low (1 point)		4	3	1	4	2	7	15.5	8	2	2

* The number of participants represented by a half (i.e., 3.5) denotes a respondent who rated the strategy between highest and moderate, or between moderate and lowest. This awarded a half vote for the two corresponding ratings.

APPENDIX K: RESEARCH-BASED INSTRUCTIONAL STRATEGIES CHART FOR INTERVIEWS

Interview of Program Coordinators & Administrators –

SITE _____ DATE _____

PROGRAM MODEL BEING IMPLEMENTED: _____

TWI Instructional Strategy	<i>Rate of Success</i>			
Small Group Guided Reading	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Dual Literacy	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Content-based Instruction	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Vocabulary Development	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Oracy	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Bridging/The Bridge	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Heterogeneous Collaboration	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Other Strategy _____	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Other Strategy _____	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>
Staff Professional Development on Dual Language Immersion Practices	<i>Highest</i>	<i>Moderate</i>	<i>Low</i>	<i>N/A</i>

APPENDIX L: EMAIL OF REQUEST FOR TEACHER PARTICIPATION IN STUDY

Email of Request for Teacher Participation in Study

April 17, 2017

Sharon R. Goldman, Ed. S - University of North Carolina at Chapel Hill

Dear TWI Teachers in participating North Carolina TWI schools;

I am excited to include your experiences teaching Spanish-speaking students in your dual language immersion programs. You have been selected from a large number of schools as one of the ten sites for inclusion in this study. Ground-breaking strides are being made in your classrooms to provide your students with the greatest possible education, and this study aims to highlight only those practices which you have developed that allow your students the most success in reading. Imagine becoming part of a small group of schools noted in our state for closing the achievement gap between ELLs and English-speaking students! This research will be conducted only by me and requires a minimal amount of your time. The benefits for you include access to free data analyses conducted on your programs, comparative analyses being done across the district and state, as well as the opportunity to participate in a study which could change the way ELLs are taught. It may also help to identify a “gold standard” for ELL instructional strategies and support the program initiatives you have established in your district.

In order to gain knowledge of particular strategies that you are using in your classrooms, I need the participation of teachers. One thing I know from being a teacher and an administrator is that program development and implementation are often slightly different.

I aim to clarify specific implementation strategies for reading that you equate with the most success for ELL students in your TWI classrooms. I have developed a questionnaire that will allow you to anonymously answer questions about your program without any identifying information regarding you personally. Participation in research can pose questions regarding any potential risk of harms to your reputation or employment status, so it is with the utmost care I have developed a protocol for ensuring confidentiality and anonymity for your responses. The questionnaire will be sent electronically to over 150 teachers in TWI classrooms across the state, and there will be no way of identifying who has participated. No question asks your affiliation with any particular school or district, and all schools involved in the study have been de-identified with alpha-numeric coding schemes. The data collected will highlight overall findings from teachers with the following items being the focus of this study:

- What instructional strategies do you use that are the most successful for improving academic proficiency in reading for ELLs?
- What percentage of the day is being taught in English? In Spanish?
- What content is being taught in English? In Spanish?
- What types of professional development are you being offered to support the development of your teaching strategies for ELLs?
- How would you rate the overall effectiveness of using these strategies for teaching reading in your TWI program?
- What are the biggest challenges to delivering the DL immersion program in your classrooms?

I sincerely hope you will strongly consider being a part of this important study which hopes to learn from what you are doing in your schools to improve education for the Spanish-speaking ELL students in our schools. Attached you will find a detailed description of the process which will be used for this study. Please contact me, the principal investigator for this study, with any questions or concerns that you may have I will be in your schools soon and am available for any questions or concerns you may have regarding this study or your participation in the teacher questionnaire.

Yours sincerely,

Sharon R. Goldman, Ed. S

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APPENDIX M: EOG READING PROFICIENCY BY GRADE LEVEL

District Spanish-speaking LEP proficiency on Reading End-of-grade vs. State averages

		District A		District B		District C		State
	YEAR	DL	NDL	DL	NDL	DL	NDL	All LEPs
Grades 3-5	2015	23.7%	3.7%	23.2%	9.3%	10.0%	17.9%	18.7%
	2016	61.0%	26.7%	25.0%	18.8%	6.8%	26.7%	18.5%
	2017	18.0%	4.3%	39.8%	0.0%	12.8%	27.4%	18.2%
		District A		District B		District C		State
	YEAR	DL	NDL	DL	NDL	DL	NDL	All LEPs
Middle School	2015	55.5%	24.4%	32.4%	25.0%	.	.	9.6%
	2016	.	3.9%	51.3%	.	.	.	9.6%
	2017	10.0%	9.6%	29.0%	.	.	.	8.0%

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